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Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*The Causes, Results, and Treatment of Lacerations of the Cervix Uteri.* Clinical Lecture, delivered on the 2nd June 1882. By ANGUS MACDONALD, M.D., Physician for and Clinical Lecturer on Diseases of Women, Royal Infirmary, Edinburgh.

DELIVERY under normal circumstances even is constantly associated, in primiparæ at least, with more or less traumatism of the genital passage. The cervix uteri is never found, at the termination of the first stage of labour in a first case, to dilate sufficiently wide to admit the head and body of the child to pass. It is, indeed, to all appearance deficient in tissue to enable it so to do. Consequently on all such occasions, with a full-sized child, it is found to tear. The upper part of the vagina, also, frequently gives way, and still more frequently the lower. The perineal body is usually more or less lacerated, and often deeply and seriously so. The great bulk of these lacerations prove to be unimportant in themselves and transient in their results, but a certain proportion of them are serious and involve surgical interference to remove their evil effects. It has long been acknowledged that perineal injuries, when severe, require surgical interference. But whilst the plastic operation on the perinæum has been for long regarded as warrantable and necessary, the corresponding operation upon the cervix is only of very recent growth, and cannot be said to have as yet fully secured the acquiescence of British gynæcologists.

I am far from disposed to unduly magnify the importance of this question, and the more so because we live in times when most thoughtful gynæcologists cannot avoid feeling that a tendency to the too frequent application of surgical methods in dealing with women's diseases is widely, and not unfrequently disastrously, prevalent. But I should like to state that experience tends to lead me to the conviction, that at any rate as many women suffer from injuries of the cervix uteri of a character remediable by surgery as suffer from similar injuries of the perinæum, and that the plastic operation which has as its object the restoration of the cervix uteri to as near as possible its normal condition is equally as much warranted as the similar operation upon the perinæum. For the comfort, also, of hesitating operators I am able to state that the operation on the cervix is the much more easily performed of the two, and is likely to be much more frequently successful.

I wish it to be understood that I am at present treating of injuries to the cervix and their results when of a minor degree. I state so in order to guard myself against being supposed to overlook or ignore those terrible lacerations that occasionally arise in connexion with retarded or obstructed labour, and which, of course, fall under the management of the obstetrician at the period of delivery, and cannot come under the heading of gynæcology in its more restricted sense. It has been urged to treat cervical lacerations at the moment of delivery; and although, judging from the changes of opinion that have taken place within the last ten or fifteen years in the direction of treating serious perineal tears at once, and not waiting to ascertain what nature's efforts unaided may effect, I am not indisposed, on theoretical grounds, to believe that ultimately such may come to be the acknowledged procedure, yet at the present time I have no experience of such operations, and do not feel warranted at present in recommending them. I prefer to wait to see whether such tears shall heal up so far as to be no essential barrier to the woman's enjoyment of life, and only recommend operative interference when unmistakable symptoms of distress and discomfort present themselves.

I mean to spend the remainder of this hour in showing you the nature of those cervical tears to which I have restricted myself, and the means by which I believe they may best be coped with. As the merits and demerits of the method of treatment of those lesions of the cervix known as Emmet's operation, and which you will perceive in the sequel I have adopted in the management of all the cases I lay before you, have been very much canvassed of late years among British gynæcologists, it will, I think, conduce to let you understand my relation to the subject better if I submit to you a short reference in explanation of how I was led to adopt it.

In the summer of 1877 or 1879 I attended for some months a lady in Edinburgh whose husband belonged to America. This lady suffered from the results of deeply torn cervix, the consequence of an antecedent delivery. The body of the uterus was in a normal condition. There was no endometritis, no uterine tenderness, no ovarian disease, and no pelvic complication. But the cervix had been deeply cleft on both sides. It was much everted and greatly hypertrophied. The everted mucous membrane was, as is usual in those cases, much swollen, very vascular and reddened, presenting the appearances, in an aggravated degree, which were wont to be styled "ulceration of the cervix," a condition that I think has been tolerably clearly proved to be no ulceration at all. The symptoms complained of in this patient's case were very great menorrhagia and consequent anæmia, with general enfeeblement, also leucorrhœa in the intermenstrual period. There was no dysmenorrhœa. I treated the case, according to my then knowledge, with local non-irritating astringents accompanied with general tonic treatment. But after some time I was sorry to see the patient leave town without, to my mind, being materially bettered by my help. I may be allowed to mention that during one of her menstrual periods the bleeding was so severe as to seriously threaten the life of my patient.

In the course of the autumn this lady visited Boston to see her husband's friends. I was gratified to learn, by a letter from her husband, that while there Emmet's operation had been performed upon her, and that it had been completely successful. There had been considerable weakening of the patient through loss of blood during the operation, but the menorrhagia had entirely ceased, and the patient had recovered good health. Of the truth of these statements I was able to satisfy myself nearly two years after the operation, when the patient called on me on her way to the Highlands, and I was further delighted to find matters exactly as represented.

Meanwhile reports of the operation, which had been introduced several years previously by Dr Emmet[1] for the cure of split cervix, became more general in the records of American gynæcological practice, and I resolved to avail myself of the first opportunity to test its value. This leads me to record briefly the cases, nine in number, in which I have operated, after which I will describe to you a case at present in the ward waiting operation, and on which I propose to perform Emmet's operation on Wednesday next, 7th instant, so that you may thereby have the advantage of watching its treatment from beginning to end.

Case I.—Mrs T., who had been in the habit of consulting me occasionally for years on account of backache, menorrhagia, leucorrhœa, and dysmenorrhœa, and who dated all her ills from her first and only confinement, happened to apply for advice about this time. Her labour had been difficult, I think instrumental. After getting tired of seeking help from her family doctor, she had applied to me. The pathological conditions which were associated with the above symptoms were as follows, viz., deep transverse tear of the vaginal portion of the cervix uteri, with much hypertrophy of the part, and ectropion of both anterior and posterior lips. The body and fundus of the uterus were normal. There was no ovarian or pelvic complication; yet the menorrhagia, leucorrhœa, and backache were such as to occasion the patient much distress in the discharge of her various duties, which included, among other things, a great deal of standing in attending upon a shop. I had been able to relieve her from time to time greatly, but the symptoms returned with provoking persistency. I now suggested to her the new treatment, which I had reason to believe would be radical in its results. The patient at once assented to have it tried. Accordingly, after due preparatory treatment by hot douche, rest, etc., Emmet's operation was performed on her on the 8th of July 1879. In the management of this case I was assisted by Drs Playfair and Jardine. The operation was completely successful, as every stitch adhered by first intention. For the first month or two some backache was complained of, but there was no more leucorrhœa or dysmenorrhœa, and in the course of three months all disagreeable symptoms had disappeared, and the patient became, and has ever remained, as she herself expresses it, "quite a new woman."

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[1] "Surgery of the Cervix," *American Journal of Obstetrics*, Feb. 1869.

Encouraged by this experience of Emmet's operation, I resolved henceforth to practise it in suitable cases, and continued to do so till I was rudely interrupted by illness last July. This leads me to consider

CASE II.—M. M'F., æt. 37, mother of five children, admitted into Ward XXVIII. 31st December 1879. This patient's labours had been difficult throughout, but the last one, which occurred six years ago, was specially so, and had to be terminated instrumentally. Since that time she has suffered from severe menorrhagia. For the last eighteen months the intervals between the menstrual periods had only been eight or ten days. Two miscarriages had in the meantime occurred, at the fourth and fifth months respectively. The patient, in addition to her menstrual troubles, suffers from well-marked aortic obstruction.

P. V. et S.—Cervix is split transversely. The slit on the right side involves the entire tissue of the organ, and extends into the vaginal wall. That on the left is much more shallow. The entire vaginal portion of the cervix is very much hypertrophied, and both its anterior and posterior lips everted. The mucous membrane included between the edges of the everted lips is very much reddened, spongy to the feel, and bleeds readily on being touched. Uterus is otherwise normal. The patient complains of down-bearing pain in the pelvis, pain in the back, and profuse muco-purulent discharge in the interval between the periods.

As this patient's case seemed to me one which fully warranted operation from its undeniable severity, I first prepared the parts by the use of the hot douche for some time, and allowed the patient to recover her strength by rest in hospital, and then, on the 3rd of

February 1880, proceeded to make raw the edges of the torn surfaces, removing the superabundant tissues so as to admit of accurate coaptation, and then brought them together with silver twisted sutures. The vascularity of the parts gave rise to considerable hæmorrhage, which we arrested for some time by means of a rough sort of tourniquet extemporized out of some twisted wire. This, however, slipped before we finished the operation, and we had to complete it as best we could. The result was most satisfactory. There was hardly any pain complained of. The surfaces adhered completely. The patient's leucorrhœa disappeared. We did not have her sufficiently long under observation to be able to state that the menorrhagia completely disappeared; but the ward-book states that she was discharged cured on the 27th of February, and as she never returned we have good reason to believe that all went well with her.

CASE III.—Mrs P., æt. 31, mother of three children, admitted into Ward XXVIII. 14th January 1880. Since birth of last, five years ago,—and her labours do not appear to have been peculiarly difficult,—the patient has had excessive menstruation, with leucorrhœa between the periods, and much backache.

P. V. et S.—The cervix is considerably split transversely, and the vaginal portion considerably hypertrophied. Both lips are everted, and the interjacent mucous membrane is red, angry-looking, and bleeds readily on being touched. After preliminary treatment by rest and hot douche, Emmet's operation was performed on 17th February 1879. In this case the operation was easy, and only three sutures were required—one on the one side and two on the other. This patient did excellently well. All the stitches held. She menstruated once in the ward after operation, and she stated that the flow was less than it had been for years. She was dismissed cured on the 12th of March 1880.

CASE IV.—S. S., from Barrow-in-Furness, æt. 46, admitted into Ward XXVIII. 13th April 1880, complaining of pain in the lower part of the back, falling down of the womb into the lower part of the vagina, and occasional pain on micturition. Her illness began fifteen years ago, after the birth of her sixth child. Her medical attendant then told her that the womb was nearly born along with the child. This patient had no menorrhagia and little leucorrhœa. She has an insufficient mitral, and complains of occasional palpitation and dyspnœa on exertion.

P. V. et S.—The vaginal portion of the cervix uteri is immensely hypertrophied. Its lips are widely everted and thickened, and on its left side its entire length is traversed by a deep fissure. Several enlarged Nabothian follicles are seen studding its surface. The sound passes 3½ inches. But the body of the uterus appears to be normal in size and in position. As I regarded the cleft in the left side of the cervix as the cause of the great hypertrophy of the vaginal portion, I proceeded on the 16th of April to raw the edges of the cleft and bring them together. This could only be done after digging out a considerable amount of the hypertrophied tissues in the body of the cervix, so as to admit accurate coaptation. For some reason or other the first operation proved a complete failure; but on the 29th I repeated it with entire success. The whole length of the torn surface united firmly, and the natural shape of the cervix was restored. As I had the best reason to believe that, now that the cause of the hypertrophy was removed, absorption would complete the case unaided by art, I dismissed the patient on 28th of May.

About this time other two cases of split cervix entered the ward. But in the one case there was too much acute disease in the pelvis to warrant operation, and in the other the symptoms gave way to soothing and astringent local treatment.

CASE V.—Private case. Mrs B., æt. 30, mother of three children, and who had had several miscarriages, suffered from menorrhagia and leucorrhœa, with much backache and pain in the left groin. The uterus in this case was considerably congested. The cervix was deeply cleft, especially on the left, where the tear ran into the vagina, and was accompanied with some puckering of old cicatrix therein. I operated in private on this patient on 10th May 1880. The parts adhered excellently. The backache and menorrhagia were very much lessened, and the troublesome abrasions that used to form around the os were entirely removed, whilst the general health of the patient correspondingly improved.

CASE VI.—Mrs D., æt. 29, admitted into Ward XXVIII. 30th October 1880. The patient had one child at term, nineteen months ago, since which period she dates the commencement of her illness. She complains of much pelvic pain, greater on right than on left side; pain also felt in the hypogastric region. The leucorrhœa has been profuse for the last fifteen months. The catamenial flow is not greatly altered.

P. V. et S.—The cervix is found to be deeply cleft on both sides, but especially on the right. There is also considerable hypertrophy and redness of the mucous membrane. After preliminary preparation, the torn cervix was restored by Emmet's operation on the 10th of November 1880. Six stitches were needed. The surfaces adhered excellently. She was discharged on the 25th.

On 3rd of December the ward-book states that the pain in the back and leucorrhœa had entirely gone, and that the patient had returned to express her thanks for her great improvement.

CASE VII.—Mrs C., æt. 22, admitted into Ward XXVIII. 4th March 1881. Patient has had one child, and complains of pain in the left side, much leucorrhœa, and of dyspareunia. She is somewhat anæmic, but otherwise healthy. Her illness began three years ago, after birth of her child.

P. V. et S.—Vaginal portion of cervix abnormally hard and hypertrophied, torn laterally on both sides; lips of cervix both markedly everted, surface very largely abraded. Uterus on whole normal. Left ovary slightly enlarged and somewhat prolapsed.

After a fortnight's treatment in hospital the cervix was restored by operation. Seven stitches were needed. The operation succeeded completely. Before the patient left the hospital the size of the cervix was already much diminished.

Case VIII.—Mrs J., æt. 39, admitted into Ward XXVIII. 24th March 1881, complaining of down-bearing pain, profuse leucorrhœa, and a certain degree of menorrhagia. The patient had been twice delivered at term, last time 14½ years ago. Her illness dates essentially from birth of her second child, though she was in some degree affected ever since her first delivery 17 years ago.

P. V. et S.—Cervix much hypertrophied; both anterior and posterior lips everted; torn transversely; much abrasion of the rolled out cervical mucosa. After the usual preparatory treatment of rest and hot douche, the operation for split cervix was performed. Seven stitches were needed. The operation succeeded excellently. She was discharged on 27th April 1881 much improved, though cervix still somewhat tender.

Case IX.—Mrs H., æt. 35, admitted into Ward XXVIII. 13th May 1881, complaining of pain in left side and in the back, some leucorrhœa, and lately menorrhagia. Patient has had eight children; all her labours were natural. She is very nervous and weakly.

P. V. et S.—Vaginal portion of cervix hypertrophied, deeply split transversely; both lips everted; body and fundus of uterus normal. Some tender fulness was found behind and to the left of the uterus; considerable abrasions around the outer os. After preliminary treatment to subdue the pelvic irritation, the ordinary operation was performed to restore the cervix, with complete success. Three stitches were used on each side. The patient recovered admirably, and was discharged well on the 30th of May.

Case X.—S. B., æt. 24, mother of one child, admitted into Ward XXVIII. on 6th May 1882, complaining of pain in the left side, increased on walking. Occasional pain in right, with a feeling of weakness in the back, leucorrhœa, menorrhagia, and dysmenorrhœa. Suffers from too frequent micturition. This girl's illness dates from her labour twelve months ago, which was tedious. She also suffers from occasional attacks of rheumatism, and is altogether of a rather excitable temperament. There is no cardiac or pulmonary disease.

P. V. et S.—Vaginal portion of the cervix is deeply cleft both towards right and towards left. On the left side there is some puckering of the vagina, evidently the result of a tear at delivery. Ectropion of both lips of cervix. Body of the uterus normal in position and perfectly movable, but very distinctly enlarged, especially towards the fundus. It is also abnormally rounded in shape. The whole organ is tender. Right ovary can be felt; is somewhat displaced downwards, is also enlarged slightly, and is very tender on pressure. Left ovary is normally placed, and is apparently normal. Both ovaries are freely movable. Cervix uteri is seen to be greatly hypertrophied, abnormally red, and intensely abraded—so-called "ulceration of the cervix." Sound passes 2¾ inches, and causes no pain.

This girl presents a tolerably well-marked instance of the early condition of the lesion represented in the above cases.[1] It was the presence of this case in the ward, and the prospective opportunity that you possess of watching not only the case, but the results of the operative treatment in it, which led me to lay this subject before you to-day. During my illness last winter Dr Chapman treated for me five cases of cervical laceration. In four of them he operated with the most satisfactory results. The fifth case yielded to treatment by hot douche and glycerine plugs.

And now a few observations to direct your attention to the precise kind of symptoms and changes which group themselves round serious lacerations of the cervix uteri. You will observe that the patient was delivered for the first time twelve months ago, that her labour was very tedious, but does not seem to have been instrumental. Ever since that period she has suffered in health. She has irregular pelvic pains, accompanied with menorrhagia, dysmenorrhœa, and some leucorrhœa. On examination the uterus is found to be somewhat imperfectly involuted. The vaginal portion of the cervix is very much hypertrophied; it is also deeply torn, its lips everted, and between these lips the irregular hollow which is bounded by the edges of the lips of the everted cervix is covered with a red, angry-looking surface, which bleeds on the slightest provocation. The cervix, and possibly also the body, during menstruation becomes congested, and the patient experiences much pain during the flow. The left ovary appears to be healthy, but the right is getting chronically enlarged, apparently in sympathy with the uterus and cervix. From the puckering on the left side of the vagina it is more than probable that a parametritis followed the delivery, which has all but completely disappeared, as such effusions frequently do. Certain it is that the patient had a cervical tear passing on the left into the top of the vagina.

Now, such a case, if left alone, goes from bad to worse, as you can see on reference to our Case II. and the case of the lady operated on in Boston. The tear leads to ectropion of the lips. The mucous membrane of the cavity of the cervix, normally bathed in an alkaline mucus, is exposed to constant irritation from the acid vaginal mucus, as well as from friction against the back wall of the vagina. The hypertrophy of the cervix arising from this irritation increases, the abraded surface enlarges, the glands of Naboth situated in it increase in size, the leucorrhœa, menorrhagia, and dysmenorrhœa are intensified, whilst there is established a predisposition to disease of the uterus and ovaries. Undoubtedly, also, the imperfect cervix predisposes strongly to abortion. It will be noted that abortion occurred repeatedly in several of our cases; and from my own personal observation, as well as from the recorded observations of others, I am certain that severe tear of the cervix not only tends to sterility, but predisposes greatly to abortion in case the patient becomes pregnant. Dr Emmet[1] is strongly of opinion, from his own observations, that cancer of the cervix is very likely to arise in cases of rupture. I have not been able to establish or refute this opinion from my own observations, although I have made inquiries in a large number of cancer cases; but from the recent observations of Rugé and Veit[2] it is certainly demonstrated that the glandular changes arising in the hypertrophied cervix in cases of this disease bear a suspicious likeness to the early changes which epithelioma of the cervix produces.

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[1] This patient was operated on on the 7th of June, and made, on the whole a good recovery.

As to causation, doubtless these tears are primarily due to the accidents of delivery. They are probably more frequent on the left side of the cervix than on the right, as the occiput is more frequently to that side, and as right lateral obliquity of the uterus is much more common than left lateral obliquity of it, so that the uterine distending force inclines more to the left than to the right side. There is no reasonable doubt that tears occur anteriorly and posteriorly also. But, besides the fact that they are not usually so large nor so frequent, there is some reason to believe with Emmet that the anterior and posterior walls of the vagina do not compress the cervix at the sides so well as the lateral walls do the more central portions of it, so that while spontaneous healing occurs frequently when the tear is anteriorly or posteriorly, this seldom happens when the tears are lateral. But in many cases the cervix presents its hypertrophy with radiating sulci or tears, so that it cannot be said that all ruptures in the anterior and posterior lips do heal spontaneously. In my opinion ruptures are not found to give trouble so frequently in the anterior and posterior parts of the cervix, rather because in those situations they do not so frequently occur of a primarily deep nature than because they heal up so readily as has been supposed when they do occur. At any rate it is difficult to understand how the vaginal walls should act so differently in the antero-posterior direction from the manner in which they are said to act in the lateral direction. But doubtless, also, other effects besides normal distention by the fœtal head and body contribute to injuries of the cervix at delivery. Of course instruments occasionally do harm; but I dread more the injury resulting from the meddlesome application of obstetrical fingers in hurrying dilatation of a slow cervix, or in forcibly pushing the neck over the occiput during a pain. The practitioner is sadly tempted often to hasten delivery in this way; but if he duly regards the interests of his patient, I think he will almost always let the cervix alone. I further believe that in so doing he will seldom lose any time. Hurrying delivery by turning or otherwise, when the neck is imperfectly dilated, is apt to cause rupture of the cervix.

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[1] *The Principles and Practice of Gynæcology*, Emmet, London, 1879, p. 493.

[2] "Zur Pathologie der Vaginalportion," *Zeitschrift fur Geburtshülfe und Gyn.*, Bd. 11, S. 415.

If, therefore, such effects follow tear of the vaginal portion of the cervix, how are we to obviate them? Various methods of treatment have been tried with more or less success. Amputation of the hypertrophied cervix has been often recommended and practised. This is, however, a very barbarous method, as it is found, when the rupture is healed, that the cervix gradually absorbs, and thus the hypertrophy disappears. The destruction of the abraded surface with some strong escharotic, such as fuming nitric acid, caustic potash, acid pernitrate of mercury, and even the actual cautery, have also been largely employed. They no doubt succeed in a large proportion of cases. The explanation is that the irritated, hypertrophied, and congested mucous membrane of the cervical canal which has become rolled out is destroyed entirely, along with more or less of the subjacent tissues. There results cicatrization of the subjacent surface and arrest of the symptoms which the inflamed mucous membrane caused, with more or less contraction and absorption of the cervix. But I put it to you, gentlemen, whether such treatment is not more properly called a mutilation. The mucous membrane which causes the abrasion is, on the whole, healthy mucous membrane, and when rolled in again gives no further trouble. Those reddened surfaces were long looked upon as superficial ulcers. The observations of Tyler Smith and others favoured this view. But those of Rugé and Veit, in the work already referred to, show that the surface is completely covered with cylindrical epithelium, and that the condition is of the nature of chronic irritation of the mucous membrane, with multiplication of its glandular, vascular, and connective tissue elements, and in no sense an ulceration or even a true abrasion. That being so, the method of treatment by application of lunar caustic, once so much in vogue, and even now too much practised, could only be injurious as increasing the irritation without destroying the irritated tissue or removing the cause of irritation. In very slight cases, doubtless, the application of caustic is useful, and many cases can be cured by the continuous use of the hot vaginal douche unaided by any other application. Without, however, taking up your time in detailing the methods of treatment that have or may be adopted, let me explain that which we have followed in the management of our cases.

It will, I think, be granted that, if the disease is mainly due to rupture and rolling out of the cervical mucous membrane, and to the irritation which results from the exposure of this mucous membrane, which is naturally bathed in an alkaline secretion, to the action of the acid vaginal secretions and to friction against the back wall of the vagina, the most natural treatment is, with Emmet, to roll the cervix back again into its natural form and secure it in that position by the necessary plastic arrangements. In this way all risk of the continued irritation of the mucous membrane is removed. But in order to secure these results certain rules of management must be followed.

1st, The Preparatory Treatment.—The patient is prepared for the operation by rest in bed, hot water douche, and other suitable treatment, to reduce the congestion of the parts and to subdue any intra-pelvic inflammation or irritation that may coexist. Of late it has been proposed to perform the operation in the face of certain acute pelvic inflammatory conditions, with a view to their benefit by the operation.[1] But to this plan I am not prepared to subscribe. I always subdue such complications as thoroughly as possible before operating.

2nd, Exposure and Fixation of the Cervix.—To have the vaginal portion well under control during operation is a necessity of success. The cervix is exposed by Sims's speculum. The operation, if the uterus is fixed by adhesions, must be performed with the parts *in situ*. But if the uterus is free to move, much advantage is gained by depressing the cervix to the vulva, as there is then much more room for passing the needles. In either case the cervix needs to be fixed. This can be imperfectly done by hooks, but tolerably thoroughly by fixing a volsella in each lip, and either steadying the cervix or depressing the entire organ by pulling through them on the cervix. But hooks, and even volsellæ, readily lose their hold or are pulled through. It is better to follow the suggestion of Dr Jackson of Chicago,[2] and pass a thick thread through each lip, and then, tying each thread long, to form thereby a strong loop in each lip, by which the cervix may be controlled and the entire uterus depressed if practicable. By pulling both threads at once the two lips can be accurately approximated, and by pulling with one loop in one direction and with the other in another the lips can be separated and held in any required position to facilitate paring the edges or passing or securing the sutures. A further improvement has been introduced by Dr Goodell. This consists in using only one stout thread passed through both anterior and posterior lips, and then tied long so as to form a single loop. This thread is passed through the cervix in the mesial line of the body, and is thus a reliable guide at the end of the operation to where the external os should be, and in this respect is more trustworthy than the two loops. For the purpose of keeping the two lips apart the single loop is, if sufficiently long, as serviceable as two loops, since by pulling upon the part of the thread passing between the anterior and posterior lip the large single loop is easily converted into two smaller loops, which then can be manipulated singly.

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[1] Goodell, *American Journal of Obstetrics*, January 1882.

[2] *American Practitioner*, July 1880.

3rd, Paring the Edges.—The cervix being exposed and steadied as already explained, the patient being placed in the half-side half-face position, or in the lithotomy position, and chloroformed, the next step is to raw the edges of the wound. In so doing the superabundant tissues of the hypertrophied cervix are to be removed if necessary, so as to admit of perfect coaptation without unduly straining the parts in the grasp of the stitches. This is absolutely necessary to secure success, as if the stitches drag too much there is almost certain to be failure of the operation. The stitches and rawing must be so arranged as to secure as near as possible the normal condition of the cervix, consequently near the base of the cervix the rawed surface must be broad and the sutures deep, whilst near the apex its rawed surface is thin and the stitches introduced shallow. In this way the cavity of the cervix is restored nearly to its original condition, and no cavity is left for accumulation of mucus, which would be the case if we contented ourselves with merely securing adhesion of the surface of the rent only. It is surely not necessary to remark that the parts that are to form the cervical canal remain untouched. In rawing, care is needed where the tear abuts upon the vagina, *i.e.*, at the base of the rupture. Here the tissues removed must be as superficial as possible, in case we should have troublesome hæmorrhage through wounding the cervical artery. The edges may be pared by knife or by vaginal scissors. I prefer the latter usually, as less likely to be followed by bleeding, and also as more manageable as a rule.

4th, Arrest of Hæmorrhage.—If the cervix is very much hypertrophied it is possible to apply some sort of tourniquet, such as Breisky's, which I now show you, round its base, and thereby secure a bloodless operation. But usually this is impracticable, and we endeavour to stop the bleeding by application of ice or of a jet of hot water. It is rare that a vessel needs to be tied. But it will be seldom necessary to wait for the complete arrest of the oozing from the rawed surface: it completely stops when the stitches are tightened. The necessary precaution must be taken, at the moment of tightening the sutures, to clear out every particle of clot that may be situated between the edges of the wound.

5th, Passing the Sutures.—These are passed by means of short stout needles about 1¼ in. in length, and which are held in the grasp of a firm needle-holder. Each stitch should include, when tied, the entire depth of the rawed surface at that particular spot. Some trouble from want of room is experienced in passing the stitches when the operation is performed with the uterus *in situ*, but scarcely any if we can depress the organ sufficiently.

6th, Securing the Threads.—The two ends of each thread are now to be brought through a shield and secured by a twister. The twisted threads should be cut short, leaving only about half an inch or so, and then carefully bent by the aid of the needle-holder and a hook, so as to bring the twisted ends of the thread to lie parallel to the surface of the cervix, and thus not to wound the vagina. This is a most important arrangement, and is called by the Americans "kneeing" the sutures.

7th, After-Treatment.—The patient is put to bed and is kept scrupulously at rest for nine or ten days. She is not allowed to get up to make water or empty her bowels. But when you insist upon quiet, all that is required is done. The vagina is washed out with a disinfectant lotion once or twice daily, according to circumstances. The stitches are to be carefully removed about the tenth day. The patient should not be allowed to move about much for a week later. There is little pain experienced after the operation, and the patient, when lying in bed, feels quite comfortable.

ARTICLE II.—*Alternation, Periodicity, and Relapse in Mental Diseases.* By T. S. CLOUSTON, M.D., Physician Superintendent, Royal Edinburgh Asylum, Morningside; Lecturer on Mental Diseases, Edinburgh University.

(*Read before the Medico-Chirurgical Society of Edinburgh, 3rd May* 1882.)

ONE of the most fundamental of the laws that govern the higher functions of the nervous centres in all vertebrates is that of alternation and periodicity of activity and inactivity. In all the higher species of the class the periods of inactivity are marked by unconsciousness, and are often combined with the mental phenomena of dreaming and muscular expressions or equivalents of ideation, both of which are quite as strange and inexplicable in their essential nature as the phenomena of mental disease. Both may be in a general way understood by reference to mentalization as a brain function. Neither are in any way comprehensible on any mere mind theory apart from brain. The sleep and waking periodicity of the higher brain functions is the foundation and type of all the other periodicities which exist in the nervous functions, and they are not a few. The yearly hybernation of many animals, the daily periodic rises and falls of body temperature, the daily increase and decrease of the pulsations of the heart and of the cardiac pressure, the periodic returns of the appetites for food and drink, and of the activities of the glands and involuntary muscles through which food is digested and assimilated, are all examples of secondary nervous periodicities which occur in the course of the daily life of the organism. When we look at the function of reproduction of the organism, we find that every activity and process is subject to laws of periodicity of the most marked character, and there can be no doubt that these all have their origin in the brain. The period of reproductive activity is always, in both sexes, the period of greatest physiological mental exaltation. The periodic rutting season in male animals, with its courage, pride, activity, display, pugnacity, and restlessness, the young-bearing and suckling period in females, with its increased courage, skill, cunning, protective and providing instincts, show how the functions of the brain are affected by the reproductive periodicity. So much are they affected that the mental characteristics of some animals are completely changed from their natural condition and reversed, the timid becoming bold and the shy obtrusive; hereditary and natural antipathies and fears disappear for the time, the habits change, night-feeders becoming day-feeders, etc. We should not approach the study of the periodicity of symptoms in nervous and mental diseases without keeping in mind these laws and facts of the physiological periodicity of normal nerve function wherever we have a higher nervous system. Looking at the mental activities of human beings, we find them strongly influenced by the physiological periodicities. What man is there who is not emotionally more elevated or depressed, more active or inactive in mind, at certain times, or at his periods of almost regularly recurring reproductive desire and capacity? What woman is exactly the same in mind before, during, and after menstruation, and during pregnancy or lactation? And the instant we pass from absolutely healthy brains, all those periodicities count for far more in the mental life, their effect in dulling, elevating, and depressing being far greater. There are thousands of sane men and women who are regularly duller in the morning and more lively in the evening, or the reverse; or who are duller in the winter and more elevated in the summer; or who are more irritable— that is, have diminished inhibitory power— at periodic intervals, or who are subject to "moods" and "tempers" periodically. There are many persons whose mental life is one long alternation of "action" and "reaction," activity and torpor, by a natural law of their organization. When we look at diseases of the nervous system other than the mental, we find many of them often markedly periodic in their symptoms and times of recurrence. I need only instance neuralgia, migraine, and, above all, epilepsy, that motor analogue of many mental diseases. Such a disease as ague I regard as proved to be neurotic from its periodicity alone.

Two French writers, Falret and Baillarger, were the first to describe as a special form of insanity certain cases in which there are regularly alternating and recurring periods of mental exaltation, depression, and sanity, and to call it *folie circulaire.*

Each of these may vary in absolute duration from a day to several years, and in relative duration to the other conditions in the circuit in different cases; but they always recur and follow each other with more or less regularity for years. In some the period of exaltation is long and the depression and sanity short; in others this is reversed. But in the really typical case the periods are, or should be, each about the same length in each psychological circle, and the recurring circles all about the same size. Usually there is something special about the exaltation and depression. The exaltation is very pure brain exaltation, with often hyperæsthesia and exaltation of many of the nervous functions with much reasoning power left, but little self-control or common sense, the condition described by the French as *folie raisonnante*, or Pritchard's moral insanity, being quite marked at the early stage. There is in nearly all the cases great increase of the reproductive nisus. The phases of the exaltation, down even to small things, recur regularly in different attacks at the same time. The depression is apt to be characterized by apathy and torpor rather than intense mental pain; there are seldom any strong suicidal feelings or impulses. And the period of sanity is apt to be a sort of stupid, inactive sanity, wanting in volitional power, full affectiveness, and spontaneity. The mental balance goes on oscillating between melancholia and mania, standing still at the happy mean of apparent sanity just long enough to raise hopes that recovery has taken place for a few times till the nature of the disease is apparent to the physician, and as often as they occur to all-hoping relatives. It is a very incurable disease, and the bad cases are usually found in asylums rather than treated at home.

The interest of this form of mental disease is small when it is merely looked at as a rare psychosis of typical form; but it is very great indeed to the student of psychiatry when, in the first place, we make it a means of studying the clinical differences in the whole brain and body state of the same patient in exaltation, depression, and sanity respectively, and when, in the second place, we look on it as a pathological illustration of the great physiological periodicities to which I have referred, and of the almost constant tendency there is in nearly all cases of insanity, or at least in most of those that are hereditary, towards relapse, alternation, periodicity, or sympathy with exalted physiological function.

The following are some illustrative cases:—

D. A., æt. 49 on admission to Asylum. He had never been placed in a hospital for the insane before, though he had had from his boyhood dull times and active times, and many slighter attacks of the kind I am about to describe for five or six years previous to his admission. In one of those, while holding an important position in India, he had got two tiger cubs, and used to try and drive them in harness through the street of the Residency. His education was good, his temperament sanguine. He had been reckoned proud and retiring, and he was of an old and distinguished family. In bodily conformation, carriage, and bearing he was the type of an aristocrat. A paternal uncle, at least, had been insane, and had shown periodicity. His family had been a very artistic one, but he had never, when sane, shown any talent in that way. He had married and had children.

Just before admission he had been spending money recklessly, proposing marriage to many suitable and unsuitable persons, getting into passions and using threats about trifles, reckless, eccentric, changeful as the winds in intention and execution. The attack was coming on, but had not come to a height till a week after a domestic loss.

When admitted he was much excited and very indignant, calling on all to witness that he was illegally imprisoned, threatening the dire vengeance of the law on all who had to do with it, but in about ten minutes he was most jolly, and amusing himself with a game of billiards. At first he was exalted mentally, but had much self-control. His excitement consisted in a constant restlessness, a perpetual twisting movement and play of his facial muscles. He could not sit still, or read, or engage in a game, or talk of one subject for long. He talked much, and could not stick to one subject; he was boastful in a way that was to him unnatural; he talked of his private affairs, and would indulge in very pointed questions and remarks, without much regard to your feelings. To a good billiard-player, "I'll give you fifty points, and bet a pair of gloves I'll beat you. I don't want to hurt your feelings, but I suppose you know your style of play is not very fine." To a man who had been in trade, "What do you think of my stockings, Mr ——? That was in your line." He was often extremely amusing, fluent, and witty, which in health was foreign to him. He would rattle off Scotch to the pauper patients in the grounds, French to the ladies, and Hindostanee to himself in a way he could never do when well. In dress he was untidy, and in habits dirty. To the ladies, of whose society he was extremely fond, he was exaggeratedly polite, with the grand air of the olden time; but if they gave him any encouragement he would soon become too familiar. He was always giving them flowers, which he had stolen, and writing them notes, or trying to kiss the maid-servants. If he had any request to make from a lady in the drawing-room, it was no uncommon thing for him to go down on one knee, with his hand to his heart, and all this done most gracefully and amusingly, as if half in fun and much in earnest.

He smoked as much as he could get, and was always grumbling he did not get cigars and tobacco enough, and begging, borrowing, or stealing more. He ate enormously, but not nicely, of everything that came in his way. He picked up and appropriated everything belonging to others that he had a fancy for, and did this also most gracefully, as if it was the most natural thing in the world. He was irritable when controlled, contradicted, or refused requests, and he was always making innumerable most impossible requests. He slept badly, and would, if allowed, sit up all night, or get up and move about by three or four o'clock. He was not susceptible to cold, sitting with all his windows down in winter.

He passed gradually out of one stage into another. The next stage was a more maniacal one. He dressed more grotesquely, and always wanted to put on three or four coats, vests, or trousers on the top of each other. He would come in to a dance with four vests, would go behind a door or another man, and slip one and then another off as he got warm. His habits and ways got more dirty and disorderly. His irritability took violent forms, assaulting his attendants, smashing furniture, etc. His conduct became so uncontrolled that he could not go to the drawing-room or to church. He would run after a petticoat without regard to the appearance or age of its wearer. His whole tastes as to food were the opposite to what they were in health. He liked porridge, which he could not abide when well, and if he did not feel inclined to take it, he would turn it out on to his newspaper, put it in his pocket, and eat it when he felt hungry. He would mix up soup, milk, and claret, and eat them together. Scarcely anything was incongruous or disgusting to him. He wore his hair very short, and would singe it or cut it himself if he could get no one else to do it. He would, in playing cricket, strip himself almost naked, or put on the most ridiculous things, a woman's hat or shawl, a cap turned outside in, etc. He turned up at morning prayers one day in buckskin tights, a red vest, a blue cap, and black swallow-tail. His bowels were always moved twice or thrice a day. During all this time he was losing or tending to lose weight in spite of all he ate. He had his better and worse days all through, usually in alternation. He used to paint and draw pictures and portraits at this stage, producing the vilest daubs, spitting on the paper to moisten his colours, and using his hand and fingers to spread his paints. These he would carry in his pocket by the dozen, showing them to any one he met—and he could pass no one without speaking. He said he had never known he could paint before. So with singing: he would sing in discord and think he was doing splendidly. Yet with all this there never left him a certain jauntiness and grace of manner. No one, at his worst, could have taken him for anybody but a high-bred gentleman.

As this brain exaltation came on and increased, each successive attack, each little phase, each little morbid way, such as smoking, eating certain things, cutting or singeing his hair and beard, painting, putting on one coat on the top of another, would recur with the regularity of the bud, leaf, and fruit of a tree.

The next stage was the gradual passing off of all these symptoms of maniacal exaltation, and a resumption of his former habits and ways and appearance.

The first stage, corresponding to simple mania, lasted for about a month; the second, with the symptoms of mild acute mania, about two months, and his recovering stage about three months, so that the whole period of exaltation lasted six months; but he did not stop at the sane stage. He at once passed into a condition of great mental depression. To see him in that, one would scarcely have known him to be the same man. His hair well grown, his whiskers trim, his features and eyes dull and inexpressive, his dress most scrupulous and neat, his manner distant and nervous; in speech reticent, and never venturing a remark; in feeling depressed, fearful, and unreliant. He thought he was so wicked that he should not see any one. He now disliked most of the people he had cultivated during his exaltation, especially relying on the chief attendant, who had controlled him most, and whom he had most heartily abused. His habits were sedentary, he could scarcely be got to go for a walk; his appetite was most moderate, and his tastes most particular, not being able to bear the smell of tobacco or to look at porridge or messes of any kind, and most sensitive to dirt and bad smells. He was very penurious about money. He was always thinking he was doing wrong or giving offence, and did not like company, while he was most moral and religious in his feelings and habits. His whole intellectual and affective life was far more unlike his exalted self than one average man is unlike another. He was stationary in weight at first, but soon began to gain. He was most sensitive to cold and draughts and loud noises, in all of which he had delighted before. He was full of a morbid sorrow and regret for his previous conduct; but he was morbidly suspicious at this stage, and used to think that the things he had given away or destroyed during his excitement had been stolen. This condition lasted for about three months, gradually passing into one of complete sanity, without depression or elevation, but with some inertness at first, and without much capacity for business. This lasted about six months, and then the signs of elevation again began. Altogether the circle of elevation, depression, and sanity had lasted about fifteen months. There was no marked line anywhere, though the most distinct and sudden transition was between the elevation and the depression.

The development of the exaltation next time was a slow process, taking about two months before it got so bad that he had to come back to the Asylum. The sort of things he did were going out to ride at 10 o'clock P.M., never going to bed, smoking all the time, foolishly wasting his money, proposing to marry ladies and women suitable and unsuitable, sometimes two in a day, telling one, as an inducement to accept him, that if she would marry him she could put him into an asylum and enjoy his pension! He went into a shop to buy a pair of gloves, and the shop-girl taking his fancy, he went down on his knees to her, telling her he had fallen in love with her. His *nisus generativus* was always exalted during the excitement, but more in idea than fact. He was always saying that if castrated he would be cured. The great difficulty at this stage was to get "facts" indicating insanity to put in the medical certificates for his admission to an asylum, for he was very acute, and knew what a doctor's visit meant quite well!

In the second circle of his disease after coming to the Asylum, all the symptoms were similar to the first, and developed themselves in the same order. The excitement was more acutely maniacal than it ever was before or has been since. The whole period of elevation was a year this time, of the depression six months, and the sanity six months, the circle taking two years to get through.

The third circle had a period of excitement of ten months, of depression of six months, and of eight months of sanity—in all, two years. The fourth circle had a period of excitement of thirteen months, of depression of about six months, and of sanity of fourteen months—in all, two years and nine months. He was out of the Asylum, living at home, for a year and eight months during part of the depression, the whole period of sanity, and the first month of the commencement of the excitement. He did not enjoy the society of his relations during the depression, and they said he would have been better to have been in the Asylum; and at the beginning of the excitement, when they had to remonstrate with or control him, his affection for them ceased, and he got on worse with them than in the Asylum with strangers. He said cruel and unkind things to them and reproached them.

In the fifth alternation the excitement lasted two years, the depression twelve months, and the sanity fifteen months—the whole thus taking four years and three months. He is now in the exalted stage of the sixth circle, and is going through all the usual symptoms, but none of them are so severe as they were; and it seems as if, at 62, his brain was not capable of taking on so acute an attack of excitement, the violence not being so great, and he is now capable of being soon tired, and takes rest, which he never did before, and the diurnal changes are very marked. He has one good and then a bad day. But the eroticism, the alertness and grace of movement, the kleptomaniacal tendencies, the small phases of his exaltation, are still there, and there is no trace of the mental enfeeblement of dementia, of bodily exhaustion, or of chronic mania. The damage done to the organ by the previous attacks of exalted morbid energizing has evidently been repaired in the intervals of sanity, during which he lays on flesh greatly. The bromide of potassium alone and combined with cannabis Indica did not influence one of the attacks of excitement when tried.

The following is the record of a case of most prolonged and, on the whole, one of the most regularly alternating cases of *folie circulaire* in short circles I have ever seen:—

D. E., æt. 30, was admitted to the Royal Edinburgh Asylum in 1847 without any history whatever, but she was a person of education and intelligence, though sent as a pauper patient. She laboured under all the symptoms of acute mania at first, and in a few days it was recorded that she was "imbecile," then in a few days more that she was quite well. Since that time till now—for thirty-five years—she has had regularly recurring short attacks of acute mania, during which she is restless, incoherent, excited, destructive to her clothing, violent, and with no memory or consciousness of familiar things or persons, this lasting from a week to four weeks usually. This is succeeded by a few days of a condition with all the symptoms of dementia, with a little depression, and she then becomes practically sane for a period of from a fortnight to four weeks. Her circle takes from four to eight weeks to complete, enfeeblement of mind taking the place of the more usual depression. We have a wonderfully complete record of her symptoms all these thirty-five years; and though once or twice there are such entries as "She is now almost continuously excited," as in 1852 for a month or so, or "Periods of excitement more frequent, of quiet shorter," as in 1853 or in 1861, "Intervals of quiet longer," as in 1862, yet the irregularities are no greater than are common in regard to menstruation in the average woman. There can be no doubt that this is a case of mental alternations governed by the menstrual periodicity. For long she had amenorrhœa, but the return of the catamenia made no difference, and, more strange, the ceasing of menstruation at the climacteric made no difference. Now, at 65, the regular alternations of acute exaltation, dementia, and sanity are as regular as ever, though the symptoms of the exaltation are scarcely so acutely maniacal as at first. The whole case is otherwise instructive, for though it shows the known tendency in a brain for acute excitement to exhaust and destroy the normal power of energizing of the convolutions and produce that diseased mentalization which we call dementia, it also shows this, that more severe attacks, when short, produce only a short dementia, which is recovered from soon. Most instructively of all, it shows that over 200 of such attacks, continued for such an enormously long period as thirty-five years, may not destroy the mental power of the brain and produce complete and permanent dementia. The brain in this proves the recuperative and resistive power that it shows in many other ways, if the periods of the exalted energizing, or the strain, or the poisoning, or the morbidness is only short in time, and the organ gets rest between one attack and the next. We all know that periodic sprees may be continued with impunity in many people for a lifetime, and that many men may work their brains at full pressure for many years if they give them a Sunday rest and an annual holiday.

I had another case, a lady, D. K., who was for ten years in the Asylum, who took attacks of excitement lasting about a fortnight alternating with periods of depression for a week, but in her case, as in that of D. B., the depression immediately preceded the excitement, and the periods of sanity were of about three weeks' duration. But, like all the rest, the length of the periods of the different conditions was not absolutely uniform. In her case, also, the regular alternations recurred up to the age of 78, when she died, and kept up in a mild form during the last six months of her life, when she had a broken leg, an ulcerated and sloughing ankle, and was extremely exhausted. But her mind was enfeebled during the quiet "sane" periods for the last ten years of her life, and she had sexual delusions about people wanting to marry her. The exhausting effects of the excitement on her brain, as in most of the circular cases, were aggravated by addiction to masturbation during those periods.

I have under my care a gentleman now, aged 49, D. D., who for the past twenty-six years has been subject to the most regularly recurring brain exaltation every four weeks almost to a day. It sometimes passes off without becoming acutely maniacal or even showing itself in outward acts; at other times it becomes so, and lasts for periods of from one to four weeks. It is always preceded by an uncomfortable feeling in the head and pain in the back, a mental hebetude and slight depression. The *nisus generativus* is greatly increased, and he says that if in that condition he has full and free seminal emission during sleep the excitement passes off; if not, it goes on. Full doses of the bromide or iodide of potassium have the effect often, but not always, of stopping the excitement, and a very long walk will sometimes do the same. When the exaltation gets to a height it is followed always by about a week of stupid depression. It seems as if the depression in those cases always was and meant a reaction after morbid over-action—a muddy mental calm after a storm, an anæsthesia after a hyperæsthesia.

In the following case the alternations began in old age—D. C., æt. 74 on admission, unmarried, had had several attacks of excitement in the three years previously. A sister is insane, and brother hemiplegic with periodic attacks of mild mental exaltation, which also came on in advanced life. But the patient had been a staid, industrious man, who had been in business all his life, and done his work well till he was over 70, leading a sober life. He has been excited for three months. It began at first by great mental exaltation and hilarity of manner. He was very fond of the ladies, but never erotic. Especially he used to laugh most immoderately at nothing in particular, putting down his stick into the ground, and bending forward and roaring with laughter for from five to ten minutes running. It had exactly the effect of a man laughing well and continuously on the stage, at a cause of which you are ignorant, it was catching, and you could not help laughing too. This gradually passed into a stage of violence, fancying insults, shouting, sleeplessness, and suspicion. During this stage his temperature was always over 99°, he ate enormously, craved stimulants, his bowels were moved twice a day, and he slept little. His conduct was extremely ridiculous for an old man. His delusions were mere fleeting fancies, suspicions, etc. In four months from the beginning of his attack he became depressed, and then he never spoke, looked dull and heavy, slept well, and got fat, but his bowels became very costive. All his brightness and curiosity and much of his intelligence left him. He took no interest in anything. There was much of stupor in his state. He felt little mental pain. After about two months he got over his dulness, and became practically sane, cheerful, chatty, and contented. After three months of this condition, or about nine months from the beginning of the attack, he gradually got exalted, and passed through exactly the same phases as before. One never gets pure mental exaltation so well as in a good case of alternating insanity. The excitement lasted about six months, from March to December, being very mild for the last three months; he then passed into a two-months' attack of stupid depression as before, and was fourteen months well, his whole circle thus taking twenty-two months to complete. He then got exalted in December, and was acutely excited for about three weeks only, and then had an attack of extreme stupor, depression, weakness, and prostration for three months. He got sane; at once almost passed into another attack of excitement. The whole duration of this circle was only four months. The excitement that followed was more acute than he had ever had before, and it lasted five months, and was followed at once by great depression lasting for six months. He was then sane for three months, this circle taking fourteen months to complete. This time he became exalted in May, and Mr Geoghegan, the Assistant-Physician in charge, thus describes him:—" Mr D. C. is abnormally excited and emotional. When in good humour he is ridiculously polite, tells the most pointless story over and over and over again, laughs louder and harder at it each time it is told, till the tears run down his cheeks and he has to hold on to some object to prevent him from falling, and his listeners, by pure contagion, are in much the same condition. At other times his conversation is absurdly religious, and he overdoes the part of a sanctimonious revivalist; and if his hearers show any want of gravity—a hard thing to avoid—he gets passionately indignant, and after a storm of displeasure goes off in high dudgeon. He can never bear contradiction or difference of opinion without anger." This circle took twenty-one months to complete. In December he became exalted again, his irritability being very great this time, and his hilarious happiness less marked. He remained so for nine months, and became depressed rather suddenly, passing into a condition of almost complete stupor, and leading an almost vegetative life. He remained so for almost five weeks, and then, without the usual intermediate period of sanity, at once one night became delirious, with hallucinations of sight, but this only lasted for one day. He was then four days depressed, and again got exalted, with more decided delusions than he had ever had before. This lasted less than two months, and he then took an attack of stupor again. By this time he was 82 years of age, and he had an epithelioma of one of his great toes, with irritation and suppuration, which acted as a drain and an irritant. This toe was amputated by Mr Bell, and he made a good recovery and has gained in flesh and strength, but has remained in the condition of depressed partial stupor ever since for two years, lying in bed mostly. He will answer questions when spoken to, but never ventures a remark or takes any notice of anything. He is in a state of complete senility and mental torpor.

In this case, as in all the others that I have seen with prolonged alternations, they were irregular, but in him the periods of excitement always began in cold weather, from October to February. The most striking circumstance about the case is its commencement at 74, after the intensity of the sexual period of life was past. It is, I think, only the second case of that kind I have known. Then the excitement coming on in spurts for a few days at the last, as if the senile brain had no longer vigour enough to get exalted, would seem to be the natural ending of alternating insanity, whether it terminates in mild or complete senility.

In the following case of D. B. the attacks of excitement and those of depression ceased at the age of 65, after alternations of the two had lasted for twenty years. He was an artist, and could only paint at the beginning of the period of exaltation and at the end of it. He never could finish a picture, and if he attempted to do so he got worse mentally. So long as painting was spontaneous or pleasurable he did it, and it did him no harm. If he could not catch a likeness, or tried to elaborate or paint in details, or had nothing but drudgery to do, he got worse. In his case there was most marked exaltation of the memory, and his delusions always took the pleasant form of a loss of his own personal identity and the assumption of that of the author whose works he was reading or repeating. As he got better he would tell me that he was very happy indeed as he lay awake at nights, for he would fancy he was Shakespeare, Burns, or King David, as he repeated aloud their works. He could vividly recall the events of his boyhood, and repeat long conversations he had held with his friends then. His eyesight and hearing became very acute, so that he could read small print, and paint without spectacles, and hear whispers; while as the exaltation wore off he had to use stronger and stronger spectacles and was very deaf. When depressed, all his bodily functions, appetites, and propensities were torpid and sluggish.

There was a difference of 2°·2 between his average temperature during exaltation and depression. I had in the case-books of the Carlisle Asylum a careful record of his condition from 1862 till his death in 1876. This shows the irregularity in the periods of alternation which characterizes most of the cases. Æt. 54, 1862, January, exalted; July, pretty well: 1863, July, quite well; October, depressed: 1864, February, exalted; July, depressed; October, quite well: 1865, April, depressed; August, exalted: 1866, January, quite well, and remained so till 1867, when in July he got depressed, and in December his alternations were diurnal, he being one day depressed and the next most excited, this lasting for a month or two: 1868, July, became depressed; October, quite well: 1869, April, depressed, and was so till October, when, instead of the usual and expected exaltation, he got quite well, and kept so for over three years, till January 1873, when he had a short attack of mild exaltation, lasting for three months. He then kept well till January 1874, when he had a few occasional days of slight excitement at irregular intervals, and then got quite calm and rational, though not energetic—in fact, he got into the typical and normal senile condition of mind and body, his brain remaining in this quiet haven of rest, after its twenty years of violent alternations of storm and sluggishness, till he died of bronchitis in the end of 1876, at 68. In this case it will be observed that there was a distinct tendency for the periods of exaltation to occur in the early part of the year, in January and February, and the periods of depression to come on towards the end of the year, from October to December. The periods of depression did not follow, but precede, the exaltation in the case, contrary to the usual experience. One should rather say that the excitement followed and seemed to be a reaction from the depression.

The following dates of the admission and discharge of D. I. show the length of the attacks in his case, for he is sent to the Asylum whenever he gets exalted, and is sent home when the excitement passes off. He is then not very painfully depressed, quiet, penurious, and unsocial, sluggish for two or three months, and then gets quite sane and does his business very well. His exaltation is of the typical kind, talkative, energetic, passionate, quarrelsome, abusive, restless, sleepless, but never incoherent, and very fond of spending his money lavishly. He once got off to London about the beginning of an attack with £1000 in his pocket, with the deliberate intention to spend it in a month and enjoy himself, as he had "led too quiet a life at home," and he pretty nearly got through it. I have reason to believe that he once made a large sum of money during one of his exalted brilliant periods, just as he was passing into the elevated part of a morbid mental circle. Hopefulness, superabundant energy, mental subtility, argumentativeness, wildness, not offensive eroticism, but with a strong leaning towards the other sex, characterize this period. The dates show the irregularity of the seasons at which the attacks came on, and of their duration. He was 45 when first admitted, and had had a few attacks previously. Admitted October 1866, discharged January 1867; admitted April 1870, discharged May 1870; admitted August 1871, discharged September 1871; admitted December 1872, discharged February 1873; admitted February 1875, discharged May 1875; admitted August 1877, discharged September 1877; admitted November 1880, discharged January 1881; admitted December 1881, discharged March 1882.

An examination of the exact periods during which the exaltation depression, and sanity persist, and their relation to each other during different recurrences, the sizes and regularity of the successive circles in each case, shows this far more than I had supposed previously to very exact investigation, viz., that the periods are not always the same in the same case at different times, and that, in fact, very few of them are regular and typical in their symptoms. I only find about one or two out of forty cases of *folie circulaire* were absolutely regular. In others the periods of excitement were often twice as long in one circle as in another, and the periods of depression and sanity varied also. The age, state of the general health, conditions of life, critical periods, diet, medicines such as a combination of the bromides and Indian hemp, have all the power of modifying the length and the intensity of the periods of exaltation particularly. We shall see how important those facts are, taken in conjunction with the views as to the essential nature of those alternations which I am to speak of. While a typical case of alternating insanity is not hopeful, yet for prognosis we must not conclude that a case is incurable merely because there are recurrences and alternations for a few months or for a year, or even for two or three years.

It is very interesting and most important to study minutely the exact psychological differences in the same brain when morbidly elevated, and depressed, and sane; and it is almost equally important to compare the differences in the bodily symptoms of the two former conditions. The cases I have recorded show many of these differences and symptoms. In the elevated stage, either at the beginning or all through it, there is an actual exaltation of many of the mental faculties, notably memory, general acuteness and ability to reason in a way; the mentalization is almost unceasing in some form. The "common sense" is gone; the power of self-control and of undertaking definite mental work is gone; the power of attention, while it may be very acute in some ways, is not under the control of volition; there is a childishness of mental condition in some respects, a foolish credulity, and affectively the patient, though he feels morbidly happy, yet his emotions are always shallow and directed in fits and starts towards objects and persons that are present, and they are always weakened towards or withdrawn from their natural objects, wife, children, etc. There is a most remarkable change in the appetites, which are usually quite perverted from what was natural to the patient. Different kinds of food, drink, and stimulants are sought for and enjoyed. The general feeling of *bien-être* is exaggerated. The courage is exaggerated, and there is little timidity left. There is an intense desire to attract attention. There is always extravagance and morbid generosity. The social instincts are enlarged, lowered in tone, and they become somewhat promiscuous, a man nearly always seeking his social inferiors.

In the stage of depression the natural affections towards children, etc., usually return or flow into their natural channels with much force, but the subjective feeling of the patient is one of misery and illbeing: he has no courage, no power to resolve, no general activity of mind. In all the typical cases there is a sort of torpor and inactivity of mind; there is niggardliness in money spending, wearing clothes, etc. There is often a feeling of profound disgust and regret at the extravagant, foolish acts of the excited period.

The changes in the bodily symptoms are very marked. The patient, when exalted, loses weight; when depressed he gains weight during the acme of the period—the difference in weight between the two periods being often two stones. When excited he takes much exercise, and is restless and never tires. When depressed he is sluggish, and dislikes exercise, and is soon tired. In the former stage his temperature is above the normal, especially in the evening; in the latter below it, the average difference being 1°·1, and in some individual cases 3°·6. In the former he can bear cold well and likes it; in the latter he cannot bear cold, and dislikes it much. In the former his bowels are mostly regular, and often moved more than once a day; in the latter they are costive. In the former his face is mobile and expressive and his eyes glistening; in the latter they are heavy. In the former he is always hungry, and his capacity for eating and digesting everything almost unlimited; in the latter he may eat well, but is very particular as to food. In the former he craves stimulants, tobacco, etc.; in the latter he often loathes them. In the former he is not sensitive to disagreeable odours, sounds, and sights; in the latter he is usually hypersensitive. In the former the skin is moist and perspiring; in the latter it is usually dry and often hard, and skin diseases, such as psoriasis, not unfrequently appear. While exalted the patient's pulse is usually full and hard; while depressed, small and compressible. In the former the sexual appetites and capacity are always increased; in the latter they are often paralyzed. (One gentleman told me that for two years he had no sexual feeling or power.) The sight and hearing are often much more acute in the former than in the latter. In the former state the patient sleeps little and lightly; in the latter long and soundly.

Many ordinary nervous symptoms follow the periodicity of the mental. I had one woman whose circle took about six weeks to complete, and whose period of elevation was always preceded and ushered in by severe cephalalgia and then by vomiting. I have had several women in whom the depressed period was preceded by neuralgia. Several of my patients can tell beforehand when they are going to get excited, by their bodily feelings.

I have for a long time been impressed with the relationship of the mental and bodily alternations and periodicity in insanity to the great physiological alternations and periodicities, and I have gradually been led to the conclusion that they are the same in all essential respects, and only differ in degrees of intensity or duration. By far the majority of the cases in women follow the law of the menstrual and sexual periodicity; the majority of the cases in men follow the law of the more irregular periodicity of the *nisus generativus* in that sex. Many of the cases in both sexes follow the seasonal periodicity, which perhaps in man is merely a reversion to the seasonal generative activities of the majority of the lower animals.

A careful clinical study of mental diseases reveals the fact that there exists in by far the majority of all the acute cases, at some time or other, in some form or degree, in the course of the disease, a tendency to alternation, periodicity of symptoms, remissions, or recurring relapses. Till I went minutely into this question I had no idea to what an extent this existed. I have taken the 338 cases of mental disease admitted to Morningside Asylum in 1881,—181 of them being cases of mania, and 129 of melancholia, the rest being general paralysis, dementia, etc.,—and I find that in 81 of the female cases, or 46 per cent. in that sex, and in 67 of the men, or 40 per cent. of that sex, there was relapse, alternation, or periodicity of symptoms in the course of their diseases. Many of the 338 admissions were chronic on admission, so that of the recent cases the decided majority showed those symptoms. 50 of the 129 cases of melancholia, or 39 per cent., and 98 of the 181 cases of mania, or 54 per cent., were alternating or relapsing, or showed diurnal, or monthly, or seasonal, or sexual periodicity. It may therefore be concluded that insanity in the female sex has more of this character than in men, and that the cases of mania have it to a greater degree than those of melancholia. In some cases it was a morning aggravation and evening improvement, those being usually cases of melancholia; in a few it was an evening aggravation, those being, contradictorily, also cases of melancholia. Very many cases of mania were more exalted one day and less so the next; many sleeping and waking on alternate nights, these being usually cases of mania. The attendants are very strong on this point of the "good" and "bad days" of these patients, and calculate much on them. Many of the cases had remissions and relapses of a few days for a time regularly. Some had monthly or menstrual aggravations. In some cases these periodic remissions occurred most at the beginning of the attack, but in far more cases towards the end of it, and during the convalescence of the patient. I had a lady lately under my care, convalescing from acute mania—E. K., a strong, healthy woman of 38. [She had recently recovered from a bad attack of rheumatic arthritis.] First attack, duration 10 days. Heredity to insanity. She remained in a state of acute excitement for about a week after admission, getting, however, at intervals sufficient sleep and sufficient nourishment. An abatement of the disease then set in, and from that period there was a slow but steady improvement until seven weeks after admission, when she was discharged, having made an excellent recovery. The most striking feature in the case, during the latter weeks of its course, was the distinct daily morning exacerbation and evening remission. Each morning showed a distinct improvement on the previous morning, but a distinct relapse as compared with the previous evening, while each evening she appeared to be further on the road to recovery than she was the evening before. In the morning she would be full of doubts, suspicions, and querulousness, while the evening would find her sensible, cheerful, and grateful. The change would come on in a few minutes without external cause. Even when convalescence was well advanced, the morning was for her a period of disgust and distrust, but with the evening came quiet, rest, and a thankful heart.

Such a case is merely a type of what is most common during all forms of mental disease, and especially during convalescence. A medical man in attendance should always prepare the minds of relatives for this tendency to relapse and alternate. Nothing is more discouraging to both the doctor and the relations, when it persists for a long time; but it is our duty to keep up their hopes and ours, and to think of and refer to examples where the tendency has been quite got over, even after a long time. I once had a young man of 20 who took regular relapses for five years, and after that made an admirable recovery, and to my own knowledge has done his work well and has kept well for ten years. Taking the chronic incurable cases now in the Asylum, I find that about forty per cent. of them are subject to aggravations of their diseases at times.

I find that the younger the patient the greater is the tendency to periodic remission and relapse. The phenomenon finds its acme in the cases of pubescent and adolescent insanity.

I also find that the stronger the heredity the greater the tendency to periodic relapses and alternations. I have never met with a single case that could be called typical *folie circulaire* where there was not hereditary predisposition to insanity. It seems as if there were certain brains so constituted as to be incapable of energizing, except irregularly swinging between elevation and depression, like a bad electric light. The above facts and statistics refer to ordinary remissions; but the infrequency of cases with such regular and continuous alternations as to be properly called *folie circulaire* may be seen from the fact that out of 800 patients in the Asylum at Morningside now there are only 16 of this kind, or two per cent., and of the last 3000 new admissions, comprising about 2000 fresh cases of insanity, less than 10 have as yet turned out of this character. But of course I do not include the cases with merely long remissions, or the cases with relapses for the first year or two, or the demented cases with occasional spurts of excitement, or the women with a few irritable days at menstruation, though many of these are of the same essential nature as the most typical cases of *folie circulaire*, following the same laws of perverted physiological periodicity in an irregular way.

I have had under my care that I can recall altogether about forty cases of typical *folie circulaire*. Of these about one-half followed a more or less regular monthly periodicity. About one-third obeyed the law of seasonal periodicity, all in an irregular way; and the remaining sixth I could bring under no known law on account of their irregularity. I have one extraordinary case, a lady, now, who was for a year deeply depressed, then for several years quite well, then for seven years more deeply depressed, then for three months passed for sane, but was really mildly exalted, then was depressed for a year, and has now been exalted, with all the typical symptoms of typical *folie circulaire*, for two years.

Commencement of the Alternating Tendency.—Though there are a few cases that begin with attacks of melancholia, yet in my experience at least 90 per cent. begin with attacks of maniacal exaltation. The ages of the patients on the first breaking out of the disease were all the way from 15 to 74, but every one, except the one, D. C. (p. 21), began within the actively sexual and procreative period of life. I find no record of a woman beginning after the climacteric period.

Termination of Typical Folie Circulaire.—As this cannot be accurately determined till after the patients have died, it is impossible for me to give accurate figures, but, of forty cases, five ceased to be subject to alternation in old age after 60, one being after 80, two being women, and the men all left in a condition of mind and brain that might be legally reckoned sanity, though in all cases there was some mental enfeeblement and a tendency to be easily upset, lethargy, and want of spontaneity and volitional power. I had another case that terminated in complete dementia. Two died of exhaustion during a maniacal period. Three things are sure about the prognosis—1. Its utter uncertainty; 2. Recovery cannot be looked for at the climacteric period in many cases; 3. About 20 per cent. may be expected to settle down into a sort of quiet, comfortable, slightly enfeebled condition in the senile period of life. In my experience very few indeed become completely demented, though two have run on into chronic mania. The tendency to death is very slight.

General Conclusions.—Looking at all those facts and considerations, therefore, I come to the conclusions that periodicity and a tendency to alternations of elevation and depression is an almost universal characteristic of mental diseases, that it is much more marked where they are very hereditary than in any other cases, that it is more common in youth, puberty, and adolescence, that it is in its essential nature merely the exaggerated or perverted physiological diurnal, menstrual, sexual, or seasonal periodicities of the healthy brain, and that the cases that have been called *folie circulaire* are merely typical or exaggerated or more continuous examples of that universal tendency to which I have referred. Another very remarkable fact about the typical form of alternating insanity is that by far the greater number of persons who suffered from it were persons of education, and far more than a due proportion of them were persons of old families. I never met with a fine case in a person whose own brain and whose ancestors' brains had been uneducated. It seems to me that the tendency to alternation of mental condition, to energize at one time with morbid hurry and then with morbid slackness, is one of the forms of brain instability which specially results from too much "pureness of blood," from the heredity of many generations of gentlefolks, all of whose brains had been more or less educated. Probably it is one of the modes by which nature brings that kind of bad stock to an end, that has become bad by over brain-cultivation for many generations. There is remarkably little tendency towards dementia in the typical cases. D. D. has done fair literary work, in the intervals of his attacks, for the twenty-six years he has been ill. I have no doubt that it was the sexual and menstrual periodicity of mental diseases seen in so many cases that formerly originated the absurd idea that they depended on the moon's changes, and gave them the now common name of "lunacy."

Treatment.—The great point in treatment is to prevent the brain getting into the vicious circle of continuous alternation by endeavouring really to complete the cure in all cases of mania—especially in all cases of adolescent mania—and by prolonged quiet and rest after attacks in persons who have shown a tendency towards recurrence and relapse. In them particularly the whole organism should be kept up to physiological perfection. I believe that a non-stimulating farinaceous vegetable diet and no alcohol is the best for them, with an outdoor life and plenty of muscular exercise. A regular mode of life, too, without excitement, is best. One thing which I have heard recommended, and which is very apt to be resorted to in the beginning of the exalted stage when the patient is very erotic, is marriage, but I have never seen any good come of it either by cure or prophylaxis. I once, with Dr Heron

Watson, had to stop the banns in the case of a lady who had been seduced and was going to be married for her money by a scoundrel who had got into her favour at the beginning of an attack. I mentioned the case of D. A., who usually proposed to many ladies at the beginning of his exalted attacks. There is only one class of medicines that I know which have the power of stopping and cutting short attacks, and of sometimes averting them for a long time, and these are the bromides, especially combined at the more acute stages with Indian hemp. The following three cases illustrate this action:—

D. F., æt. 23. This young woman has had six attacks of mania in four years. She had been insane for four weeks previous to admission. All the attacks had begun during menstruation, and while maniacal she was always very erotic, especially at the beginning of the excitement. She was violent, incoherent, noisy, dirty in her habits, and sleepless before admission and for about three months afterwards. She then got well, but in six months had another similar attack of mania, lasting for two months. She lost twenty-eight pounds in weight during this attack, and her temperature was always 1°·5 above its normal rate when she was excited. She remained free from excitement for nine months, and then had another similar attack. After four months of sanity she one night suddenly got up, smashed the windows of her dormitory, saying that the devil was looking in, and became violently excited, her temperature that day being 100°·8, pulse 108 and strong. She was ordered drachm doses of the bromide every three hours, with a drachm of ammoniated tincture of valerian with each dose. She was put into a dark room at her own suggestion. On the following day her temperature was 99°·6, and her pulse 108. She was still much excited, but not so much so as on the day before. On the second day her temperature was 99°·3, and her pulse 130 and weak, the excitement being much allayed. The medicine was after this given only three times a day. She was left in bed for a fortnight in a dark room, as she said that if she got up she would get worse. At the end of that time she was still rambling, partially incoherent, and full of delusions, but nearly free from active excitement, and the medicine was discontinued. She remained slightly affected in mind for another fortnight. At the end of a month from the day the excitement began she was well, and was discharged from the Asylum six months thereafter. I heard a few weeks ago that she was still keeping well, and it is now a year from the time her attack of mania was thus cut short (as it seems to me) by bromide of potassium. I gave the valerian because she was beginning to menstruate at the time the mania began.

It will be observed that the excitement in this attack only lasted about three days, and she had never been less than two months excited at a time in her nine previous attacks. The aberration of mind was only of a month's duration. It had never been less than between three and four months previously, every symptom of an ordinary attack being clearly present at first; and the interval of sanity has been even now longer than any such interval except that between the fifth and six attacks. The excitement disappeared as the patient showed signs of coming under the influence of the bromide and its constitutional symptoms were developed.

D. G., æt. 56, a woman who has been rather weak-minded from birth, but got married and had children. She has been subject to attacks of excitement at intervals of a year or two for twenty years.

On her admission from another asylum she was found to be a little, thin woman, who went on talking quite incoherently, was restless and destructive to her dress, and violent at times. Sometimes she refused her food, and had to be fed with the stomach-pump. Though she got much food and stimulants, she became quite run down, thin, and exhausted in mind and body before the attack was over. The first attack lasted from March till the following January; she had a short attack in April. In the beginning of the next year she had another short attack, and in the December following she had three epileptic fits (the first she ever had). They were the prelude to an attack of excitement which lasted for six months. In the following year she had another attack of excitement lasting for three months. In the beginning of this year she again became excited, and was put on drachm doses of bromide and tincture of Indian hemp, three times a day at first, and afterwards morning and evening. The medicine so completely moderated all the unpleasant symptoms of the excitement that she was kept in the infirmary ward among the sick patients. She was not noisy, destructive, and dirty in her habits, as she had been before; she did not lose flesh to nearly the same extent as before; she took her food better than ever she had done before during excitement; and the attack terminated in September, leaving her far stronger than she had ever been before after a long attack of excitement.

This case illustrates the effect of the medicine on an old person very weak in body, and perhaps, therefore, more amenable to the effects of the drug. Such cases, when violently excited in asylums, are far worse to manage and cause far more anxiety than stronger patients, and therefore it is more important to have a mild and safe sedative.

Another case is that of an old woman who has taken periodic attacks of mania for at least twenty years, and has been so much better during her last attack, under the use of drachm doses of the bromide and tincture of cannabis morning and evening, that she has been kept in the infirmary ward of the Asylum during the nine months the attack has lasted, and has, during that time, slept in a dormitory with other patients, has taken her food, and is now passing into the quiet stage of her disorder. In every attack which had occurred before she had been destructive, dirty, very noisy, and had to be all the time in the ward for the worst cases.

Pathology.—As regards the pathological appearances found after death in the cases of *folie circulaire* that died, I found in all of them more or less brain atrophy, especially affecting the convolutions, in all of them thickening of the membranes, in most of them vascular disease, with, in one or two cases, local disintegrations from embolisms and other causes of blood-starvation. In short, I found the common pathological appearances in cases of chronic insanity, with no special pathology whatever. That is what might be expected, for at the beginning the mental functions are so often quite restored between the attacks, that we can expect no marked pathological changes. The whole tendency to periodicity results, no doubt, from a mode of energizing, and not from structural change that can be seen after death.

ARTICLE III.—*Hydramnios: and the Source of the Liquor Amnii.* By ALEXANDER RUSSELL SIMPSON, F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh; President of the Obstetrical, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

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THE interesting researches of Professor Gusserow, ten years ago, into the intrauterine secretion of the fœtus gave a great impulse to the re-investigation of the source or sources from which the liquor amnii is derived. This is no new subject of debate. An extended account of the various views regarding it was given by Martin Schurig in his *Embryologia Historico-medica* in 1732. Ere that date it had already been discussed whether the fluid was of maternal or fœtal origin, and, in the latter case, whether it was produced by the kidneys, the skin, the brain, the eyes, the mouth, or the mammæ. There is even a premonition of the vasa propria of Jungbluth in the sentence quoted from Johann de Muralt, "Liquor in amnio membrana contentus eo devenit per lymphae ductus gelatina obsessos ad funiculum umbilicalem evidentes, tum etiam per arterias in placentam terminantes." And the very plausible suggestion of Fehling that the liquor comes from the cord is clearly anticipated when he says, "Depingit Bidloo in funiculo umbilicali plures parvos ductus ope microscopii detectos, quos dicit continere succum nutricium, et quorum proinde (si revera existant) usus est, advehere materiam nutritivam a matre versus fœtum, aut saltem in amnii capacitatem." The sum of all the discussion pretty much amounts to what is expressed in a sentence quoted from Marguerite du Tertre, who, in answering the question, "D'où proviennent les eaux du amnios," replies, "Les auteurs sont partagés là-dessus. Les uns pensent, qu'elles proviennent des urines et sueurs de l'enfant, et d'autres croyent, que c'est de la sérosité du sang; mais enfin c'est un grand effet de la Providence, puis qu'elles causent tant de bien."

The chief point of debate in recent times has been as to the share taken by the fœtal kidneys in producing the liquor amnii. According to Gusserow and his followers, this fluid is in the latter months of gestation almost entirely derived from the urine of the fœtus, which is supposed to be secreted regularly by the kidneys and evacuated from time to time from the bladder. Wiener even goes so far as to aver that, whilst at the very first the liquor amnii is derived from the skin of the embryo, soon after the fourth week the Wolfian bodies begin to furnish a fluid which escapes into the amniotic cavity; this is thus kept distended, first by the activity of the primitive kidneys and then by the more fully developed organ.

Now I confess at once to considerable sympathy with the old writer who asks, "Si fœtus brutorum ea sunt munditie, ut lotium hospitio emittant, cur fœtum humanum adeo sordidum habeamus, ut existimemus, eum proprium suum domicilium lotio aspergere, et, quod reddidit, ferculum deinde resorbere?" Of course we don't now need to shudder at the idea of it feeding on its own vesical evacuation, as no one now supposes that it is nourished by the liquor amnii; but the question is, Are we compelled to believe that the fœtus always lies bathed in its own urine?

The proof of the renal origin of the liquor is sought, (1) in the presence of chemical matters, such as indigo, introduced into the fœtus indirectly through the mother's blood, or directly by hypodermic injection into its own body, and secreted by the kidneys; (2) in cases where the urinary bladder of the fœtus has been found distended; (3), in the hydronephroses which result from occlusion of the urinary outlets.

1. As to the 1st, I can only say, that after reading the papers descriptive of the experiments of Gusserow, Wiener, and others, I cannot see that more is proved than that the renal function of the fœtus is sometimes called into activity, and that the distended bladder may easily be emptied into the amniotic sac. Wiener says, "There is no fact which compels us to doubt the regular secretion of the fœtal kidneys and the occasional evacuation of the urine into the liquor amnii;" but what we want are the facts which will compel us to believe in more than an occasional secretion and accidental evacuation of fœtal urine. There is abundant evidence from experiment and observation to show that the fœtal kidneys can and do sometimes secrete actively enough. What is wanting is evidence to show that there is a necessity for continuous renal activity more than there is for hepatic or pulmonary activity in the fœtus in utero.

2. This leads me to notice the second ground on which the theory of the regular renal activity of the intra-uterine fœtus is sustained, viz., the observation that the fœtal bladder has sometimes been found distended with urine. Such a case is related by Wiener of a woman who died of a burst varicose vein when far advanced in pregnancy, and in whose uterus the fœtus was found to have the bladder tensely filled with urine. The case admirably helps to prove the point which Wiener is then affirming in his polemic with Ahlfeld as to the influence of intra-uterine pressure on the fœtal secretion and excretion; but it no way proves habitual renal activity in ordinary conditions. It simply shows that when depuration of the fœtal blood is suspended in the placenta in consequence of maternal hæmorrhage, the functional activity of the fœtal kidneys is at once called into play. Where the interruption to the placental circulation sets in more rudely, we constantly see a corresponding effort at functional activity of the fœtal lungs—effort, however, that is futile, because the fœtus is shut up in its water-filled sac.

3. The group of cases where the urinary ducts are atresic at some point and dilated above has also been called into court in support of the theory of the regular activity of the fœtal kidneys. But if they prove anything, they prove that regular renal action is unnecessary in the intra-uterine fœtus. One of the most interesting cases that has recently been recorded we owe to Professor Rindfleisch. A six-weeks-old child, which had from birth suffered from difficulty in the evacuation of the bladder, died of pleural effusion. The difficulty was found to have been due to hypertrophy of the caput gallinaginis, which had led to vesical hypertrophy and double hydronephrosis. This is to me the more interesting, that some months ago I met with a parallel case. At the post-mortem examination, which Dr D. B. Hart and I made hurriedly by gas-light, we did not determine the exact seat of obstruction further than that it was below the neck of the bladder. The child appeared healthy at birth and was well for three weeks, when it began to feed less willingly and to suffer from sickness. The nurse stated that though the infant regularly wetted its cloths she had never seen it pass water in a stream, only in drops. The lower limbs and abdomen became anasarcous, the peritoneum ascitic, and the infant died rather suddenly, within five weeks of its birth, with double pleural effusion. The urinary organs were found as in Rindfleisch's case. That distinguished pathologist supposes that the distention of the ureters and kidneys had begun in utero, and that such cases afford a proof of intra-uterine renal secretion. But it seems to me that we must rather suppose that in utero the renal activity had not been called out, and that it was only after the child was born that the function of the kidneys was established, leading first to hypertrophy of the bladder, then, secondarily, to hydronephrosis, and finally to a fatal issue from the serous effusions resulting from

the impediment to renal action. So long as the child was in the uterus, having its blood depurated in the placenta, the urethral obstruction caused no disturbance. Within five or six weeks of the day when the renal activity became necessary for blood-depuration, it led to the death of the infant. Does that not mean that during the six weeks antecedent to birth the *rôle* of the kidneys was entirely passive, so that a strictured urethra was a matter of indifference, and the healthy development of the fœtus was in all respects unmodified, and that immediately after birth the renal function was called into activity, and the urethral interference with it at once began to tell on the health of the child, and within six weeks caused its death?

Whilst it seems to me, therefore, that we are not warranted in looking to the kidneys as the main source of supply of the liquor amnii, even during the later months of gestation, I by no means deny the occasional and accidental evacuation of the bladder in the amniotic sac, and I am not prepared to give a definite opinion as to the ordinary source of the amniotic liquid. I think we are wisest to acknowledge our ignorance.

Perhaps some light may come to us by a more careful observation and analysis of cases of hydramnios. The Transactions of our Society bear ample testimony to the tendency, to which I drew its attention some twenty years ago, of women giving birth to anencephalic children to be affected with excess of the liquor amnii. It was curiously illustrated in the cases of two patients who were confined in the Maternity within the same twenty-four hours, and whose histories are fully recorded in the last Quarterly Report. These two cases had this in common, that anencephalic fœtuses were born, and the birth was attended with the escape of an excessive quantity of liquor amnii.

I am here diverted from the main current of this communication to call attention to the differences between these two cases, as they illustrate a cause for the excessive accumulation of the amniotic fluid which has not been specially registered, so far as I have noticed, among the causes of hydramnios. In the first case we have to do with a multipara in her eighth pregnancy; in the second the patient was primiparous. In the first the fœtus was simply anencephalic; in the second the spinal column was at the same time bifid in all its extent. If the excess of liquor amnii be due (as in such cases I have tried to show it to be) to the secretion from this exposed serous surface, the excess might have been expected to be greatest in the case where the extensive bifidity of the spine gave an additional area of secretion. The excess, however, was most marked in the first of the cases. In that patient it was such that she overpassed the normal duration of pregnancy. She came into the Maternity about the expected date of her confinement, with symptoms of labour which passed off. The uterus was so overdistended that though contractions set in from time to time which seemed to indicate the onset of labour, they always subsided again until the fœtus died. The membranes decayed and burst, and allowed of the escape of some of the liquid. It was only after the waters had some time escaped that effective uterine effort could take place. Now I suggest that the greater excess of liquor amnii in the first than in the second case is to be explained by the greater laxity of the uterine walls of a multipara. The well-known statistics of M'Clintock give only five out of thirty-three cases in primiparous patients; of the twenty-eight multiparous cases, eight were second labours, one a twelfth, the rest intermediate. Whatever the source of the liquor amnii may be, the degree of tonicity and tension of the muscular walls of the uterus must have a large influence in determining the amount that is allowed to accumulate; and any loss of tonicity in these muscular walls will favour the occurrence of hydramnios.

Reverting now to the possible sources of the liquor amnii, it had occurred to me that in these cases one should find in the condition of the kidneys some evidence of unusual functional activity if their secretion were the usual source of supply. By some mishap both of these fœtuses had been destroyed without the special examination being made. But soon afterwards Dr Alexander sent me, for class-demonstration, another anencephalic fœtus with bifid spine, the birth of which also had been attended with the escape of an unusual flood of waters. I show you now the urinary organs. The bladder and ureters are empty, but perfectly developed, though no urine has passed through them. The kidneys, right and left, are small, and have undergone cystic degeneration, evidently from an early period. Here there can be no possibility of any participation of the kidneys in the production of the liquor amnii. The liquor was unusually abundant; but the kidneys were functionally useless. It will be of some importance in such cases to collect and analyze the liquid, so as to compare it with the analysis in normal cases; but unless there be shown to be a peculiarity hitherto unsuspected in the nature of the fluid from a hydramniotic ovum, we must conclude that the secretion and accumulation of amniotic fluid can go on quite independently of the functional activity of the fœtal kidneys.

Besides the systematic works of Tarnier and Chantreuil, Spiegelberg, Schroeder, Playfair, Lusk, I have had in view the following contributions:—

AHLFELD.—Beschreibung eines sehr kleinen menschlichen Eies, *Archiv f. Gyn.*, Bd. xiii. S. 241. Ueber einen Monopus mit vollständigem Mangel der äusseren Genitalien und des Afters, *Ibid*, Bd. xiv. S. 276.

FEHLING.—Beiträge zur Physiologie des placentaren Stoffverkehrs, *Archiv f. Gyn.*, Bd. xi. S. 523. Also, Ueber die physiologische Bedeutung des Fruchtwassers, *Ibid.*, Bd. xiv. S. 221.

GUSSEROW.—Zur Lehre vom Stoffwechsel des Fœtus, *Archiv f. Gyn.*, Bd. iii. S. 241. Also, Zur Lehre vom Stoffaustausch zwischen Mutter und Frucht, *Ibid.*, Bd. xiii. S. 56.

JUNGBLUTH.—Beitr. z. Lehre vom Fruchtwasser, etc., D. i., Bonn, 1869, *Virchow's Archiv*, B. 48, S. 523. And *Archiv f. Gyn.*, B. iv. S. 554.

PROCHOWNICK.—Beiträge z. Lehre vom Fruchtwasser und seiner Etstehung, *Archiv f. Gyn.*, B. xi. S. 304 and 561.

RINDFLEISCH.—Eine Vergrösserung des Caput gallinaginis als Ursache congenitaler Ischurie und Hydronephrose, *Virchow's Archiv*, Bd. lxxxi. S. 521.

WIENER.—Ueber die Herkunft des Fruchtwassers, *Archiv f. Gyn.*, Bd. xvii. Hft. i. S. 24.

ZUNTZ.—Ueber die Quelle und Bedeutung des Fruchtwassers. (Vorläufige Mittheilung) *Pflüger's Archiv*, B. xvi. S. 548.

ARTICLE IV.—*On the Treatment of Fresh Wounds.* By JOHN DUNCAN, M.A., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh.

I SUPPOSE that as the recipient of discharge, as a protection from external irritants, as a means of retaining parts in contact, or for other reasons, some form of dressing is required in the treatment of wounds. The ideal surgical dressing is one which, while effectually meeting these ends, requires no interference until the wound is healed. If and when this can be attained, the rapidity of healing will be determined simply by the vigour of the individual, and pain and anxiety will be absent from patient and surgeon.

Many attempts have been made to attain this end. Mr Lister's methods keep it in view; M. Guerin has aimed at it in his cotton-wool dressing; and Mr Gamgee has strongly supported a similar treatment. I have recently made some experiments in the same direction, using the salicylized wool introduced by Professor Thiersch.

Three obstacles to a permanent dressing present themselves. These are the sutures, the drainage, and the antiseptics.

A wound cannot heal quickly unless the contact of its surfaces be reasonably close. The more accurately the edges are approximated, the more certain are they thus to heal. This accurate apposition can only be brought about by sutures. To attain, then, the object which we have in view it is first of all necessary to have sutures which can be absorbed by the tissues, and we find our wants to a great extent met by carbolized catgut. But the chief difficulty in the use of sutures undoubtedly lies in the tension to which they subject the textures. If the tissues are perfectly lax, and union by the first intention take place, the new material which unites them is sufficiently strong in three or four days to resist the normal elasticity of the cutaneous envelope. In such cases a fine catgut would last for the necessary time. But inasmuch as, from exudations of blood or serum, or from other circumstances, either the union may be somewhat delayed or the tension somewhat greater, it is well that the catgut be of such a quality and thickness as to secure it from absorption for seven or eight days. More than that is unnecessary. It is a mistake to suppose that the use of a permanent material, as wire, silk, or horse-hair, enables you to resist tension. The fact is that if a wound be perfectly lax, sutures are of use only in maintaining steadiness, while, on the other hand, if the tension is such that the wound requires support against it after the first week, any ordinary suture which may have been left in will have cut its way through the skin, and, so far from doing good, will add to what inflammatory action may be present.

There are cases in which, from deficiency of skin or from other causes, we must be prepared to encounter much tension, and I believe that under healthy and aseptic conditions we may attain union of any surface which we can bring into apposition by manual pressure, and which can be so maintained without cutting off its blood supply. But in such circumstances we must distribute the pressure and take it off the margin of the wound by buttons or quills, being careful so to apply them as to get the maximum of relaxation at the edge with the minimum of pressure on any one point. It is not in virtue of the permanent nature of the material, but because of the distribution of pressure, that we meet with our success. Even thus tension is not entirely evaded. These sutures are not without their disadvantages. The material which unites the buttons tends, of course, to pass from one to the other by the shortest route, and in doing so produces ulceration, which is none the less real because it is not always visible on the surface. In septic wounds it is frequent, and in aseptic it occurs that suppuration forms in the track of such sutures, and, if it do so, is apt to be dammed back by the button. They ought, therefore, to be taken out as soon as possible. Of them, also, it may be said that in most cases they have fulfilled their mission in ten days; and unless the tension be very great indeed, and the union very sluggish, I find they may be safely removed in that time.

Plainly, then, catgut, especially if chromicized, may be used to unite the buttons instead of silver wire. When it is absorbed the buttons will lie harmlessly under the dressings, in simple contact with the skin. I have used this means of buttoning in cases where the tension was really considerable, and with admirable effect; but I have not yet ventured to discard wire when much force was required. I have, in short, long given up every suture but catgut for the edges of a wound, and only occasionally use the silver wire and buttons for relaxation.

If, then, we can get a dressing which otherwise we may leave on indefinitely, there is little impediment in the sutures. In most cases catgut may be used, and in the others a renewal of the dressing at the end of a fortnight will allow of their removal. This limitation, however, there is from the side of the suture.

Drainage is in many respects an admirable invention, and in some aspects the recognition of the principle it involves is one of the most marked improvements of modern surgery. But I have no doubt whatever that it may be carried too far. In suppurating and septic wounds it may easily become a source of irritation. As a rule, in these cases, if a drainage-tube have not fulfilled its purpose in a week, the meaning is that it is badly placed or insufficient, and in any case that a new departure must be made.

In fresh wounds, again, it is evident that if we can approximate the condition to that of a bruise we have little need for drainage. No one would think for a moment of converting a simple into a compound fracture merely with the object of evacuating the blood and relieving tension. The tension and extravasation of blood is often very extensive after severe contusion, but we await absorption with the most perfect confidence, certain that suppuration will not occur unless the conditions of constitutional health or local destruction of tissue be highly unfavourable. Now, after an injury inflicted by the surgeon, although in many cases the constitutional state may be bad, the local injury ought to be more favourable than in a severe bruise. The tissues are sharply cut and perfectly viable, and the vessels are tied so carefully that serious distention should not occur. If, then, there were no other intercurrent circumstance, drainage ought to be unnecessary. But by almost universal concurrence of opinion it is held to be necessary. The reason is to be found in the admission of air and its contents. It is because the results of such admission are the conversion of the harmless fluids of a bruise into virulent and deadly poisons, which can only be prevented from producing their pyrogenous and phlogogenous effects by immediate evacuation. The most perfect examples of the character of these products are met with in abdominal surgery, and the most beautiful results of drainage are there also seen. The bloody serum to which Dr Marion Sims has recently been drawing attention is the source of the evil. But why? No one will pretend that a little bloody serum in the peritoneum would produce an evil effect unless there were a wound. It does not do it after an operation for strangulated hernia. It only does it in a few ovarian operations. Plainly because only in these few has it been poisoned from without. And the results are there rapidly fatal because the surface on which the poison exerts its phlogogenous action is so enormous and its means for entering the circulation so free.

Well, then, if the antiseptic theory be true and its practice moderately feasible, we have no need for drainage on this account. It is not necessary to drain the bloody serum, because the bloody serum is innocuous. But it is said that the irritation of antiseptics increases the flow of serum from the wound, and renders drainage necessary to avoid tension. Practically I doubt the truth of this observation ; at least the discharge is not of such amount or kind as to make any demand for special means of drainage in the majority of our cases. On the contrary, because it is serous it flows easily through the interstices between the sutures, and it is certain that its flow ceases in a very short time. I find that if a wound remain aseptic drainage-tubing is rarely required.

I have come to this conclusion after trying all sorts of absorbable tubing, catgut, decalcified bone, and other forms. The catgut is unnecessary if the wound be aseptic, is inefficient if it suppurate. The others last too long if the wound goes on well, melt and soften in a few days in purulent discharge. A good example of the behaviour of Neuber's tubes was seen in an amputation of the ankle. It required no dressing after operating, until at the end of a fortnight I thought we might find it healed. It was so, but the large tube which had been inserted at one corner projected unaltered. I could not withdraw it, because its deeper part was firmly incorporated with the tissue. I pressed the soft parts back, cut the tube off short, and a week afterwards found it covered over. It had simply acted as an impediment to healing, and had been utterly useless from the first, for there was not a tablespoonful of dry blood in the dressings. Drainage, then, I regard as usually unnecessary in aseptic wounds in which the ligature of vessels has been properly performed, and in which the deep surfaces are keep in close contact so as to induce any slight ooze to pass outwards.

Undoubtedly if accumulation were to take place it would delay healing by keeping surfaces apart, although I do not find that in aseptic cases it tends to cause inflammation or raise the temperature. Still it is to be avoided, and there are wounds in which it is nearly certain to occur if special precautions be not taken. In these indiarubber or glass is the best material, but it ought to be removed as soon as possible, and a special dressing for the purpose is advisable on the night of operation or the following day.

There yet remains for consideration the influence of putrefaction and its prevention.

There are two methods whereby the evils of septicity may be avoided—to prevent the entrance of the germs of putrefaction, and to render the soil unsuitable for their multiplication. The first and most important involves all that minute attention to detail in cleanliness and the use of germicides which Mr Lister has so thoroughly established. His dressings fairly accomplish this object, and the results attained are admirable. But the second is scarcely less important. It is less important because, if the entrance of noxious influences be prevented, it would matter little what the nature of the soil might be. But undoubtedly germs creep in notwithstanding all precautions, and it is of great moment that they should find conditions unsuitable for their multiplication. I suppose, for example, that the chances of a wound becoming septic are much greater in a diseased than in a healthy man, that the germicide properties of healthy tissues are much stronger than those of diseased textures; and it is certain that the results of septicity are much worse in the weakly than in the strong. This object, of course, involves the care of the patient's general condition. But the soil may also be rendered unsuitable for germination by means applied locally.

I have sometimes thought that perhaps we are too timid in our application of antiseptics to wounds. I have had exceedingly good results from carbolic irrigation. I excised the os calcis in a patient of Dr Sidey's whose wound, septic before, remained so after operation. The temperature rose alarmingly, and we thought the patient would die of septicæmia. Irrigation was established by three worsted threads, which led into the cavity continuously for a fortnight a stream of 1 to 40 carbolic lotion. Yet the patient suffered in no way from carbolic poisoning, while the symptoms of septicæmia disappeared, and healing went on steadily, though slowly. But whether or no highly septic discharges should in some instances thus be charged with an antiseptic, we have other methods of rendering a fresh wound unfavourable to the propagation of germs. Two of these seem to me specially important. Dryness is highly conducive to safe and rapid healing. Moist warmth favours all forms of decomposition, and promotes exudation. Careful arrest of hæmorrhage, and a covering at once dry and permeable, are therefore strongly indicated.

Again, accurately applied compression is an aid to quick union, because it brings together and keeps in immediate contact parts which may at once adhere, and which thus also come, as it were, within striking distance, and so exercise their germicide properties with success. Further, it helps to arrest the exudation of blood from the capillaries and smaller vessels, and prevents bagging of the wound.

Now the mode of dressing by gauze and mackintosh, while reliable for the exclusion of septic influences, is in these ways imperfect. It is an immense improvement on the old painful daily dressings. But it promotes moist warmth. It does not lend itself readily to equable compression. It cannot be used as a permanent dressing. It requires renewal weekly, because the antiseptic is in that time exhausted at the temperature of the body. Doubtless exhaustion of the antiseptic would do no harm unless the discharge were sufficient to reach the edge of the dressing. If you cover an aseptic fluid with a few layers of gauze or with a single layer of mackintosh, it will remain for any time and at any temperature untainted. But the mackintosh keeps the skin underneath it moist from perspiration, and even were there no discharge from the wound, putrefaction would occur so soon as the antiseptic was sufficiently exhausted.

Considerations such as I have endeavoured to explain, and many clinical attempts with this and that method, have gradually led me to adopt a style of dressing which enables me in a large proportion of cases simply to lay the patient aside till his wound has healed. The method is as follows:—The wound is carefully and accurately stitched. If it be large, an interval of an inch or less is left between two of the stitches at some convenient part, and if, from the nature of the wound, firm compression throughout is uncertain, a few of the catgut ligatures are left long and brought out at the interval, or an indiarubber drainage-tube is inserted. In most cases it is completely closed. A piece of dextrinized oiled silk is applied. Mr Lister's object in this application is to protect from carbolic irritation; but were it not that it also prevents adhesion of the dressings, I should not consider it of importance when the edges of a wound are carefully approximated. One layer of moistened gauze is the next covering, and over it a thick padding of dry salicylic wool, firmly compressed by a gauze bandage. The layer of gauze facilitates the ultimate removal of the dressings. Without it the wool, irregularly hardened by the dried blood, forms a sort of cuirass and is apt to stick. I have tried silk instead of wool as a dry dressing. It does not, however, produce the same equal pressure throughout.

I have now used this dressing in a large number of cases, which I desire shortly to enumerate.

I. For long I have been in the habit of using a modification of the method in small wounds, whether produced by accident or by the surgeon. Having smeared them with carbolized oil, as the least irritating of antiseptic applications, and, if necessary, applied stitches, I seal them completely up with salicylic wool and flexile collodion. In cases too numerous to relate the healing has been perfect, and the failures extremely few. In large accidental wounds the dry dressing described is very successful. Thus, in two cases of immense scalp wound, and in one in which the belly of the supinator longus was completely torn across, only the one dressing was required. Septic matter, however, is apt to be introduced in such injuries. Thus, in a severe compound fracture opening into the elbow-joint, and in an extensive lacerated wound of the thigh, the dressing was abandoned for a time on account of suppuration, though both ultimately healed exceedingly well.

II. The following are examples of perfect healing in operations of a minor character. By perfect healing I mean that which occurs where there has been no rise of temperature, no pain, and no necessity for change of dressing till the wound is closed:—

a. Six amputations of the fingers for injury.

b. An amputation of the middle finger for whitlow in E. T., æt. 62, admitted 17th March, dismissed 8th April 1882. I mention this specially as a case in which septic inflammation extending far into the palm was successfully corrected by chloride of zinc.

c. Three cases of operation for strangulated hernia, viz., C. F., æt. 27, admitted 26th January; W. R., æt. 27, admitted 8th March; and C. G., æt. 84, admitted 14th March.

d. J. M'T., æt. 17, excision of sesamoid bone of great toe. Admitted 1st February.

e. C. L., æt. 27, admitted 20th June 1881. Excision of adenoid tumour of the mamma.

f. An interesting extension of the principles involved was made in the application of the method to the opening of abscesses where there is no persistent cause of pus formation, and where pressure can be accurately adjusted. Most of them were out-patients, but these may be mentioned as admitted to the house:—A. P., æt. 29, 11th March; abscess of the cord; found healed on the tenth day, the dressing not having been removed till that time; J. L., æt. 7, 11th January, large glandular abscess of neck; and E. F., 1st March, deep abscess of axilla, in whom the same success was attained.

g. J. B., æt. 38, admitted 30th March. The actual cautery was applied for ulceration of the cartilage in the knee-joint, with good effect so far as the joint was concerned. The wound was looked at simply from curiosity only twice, with intervals of fourteen and twenty-one days.

III. The following are examples of perfect healing after major operations:—

1. Mrs B., æt. 34, a patient of Dr Soutar of Golspie. The family history was most unfavourable, and she had tubercle in the apices of the lungs. Amputation of the forearm was performed for disease of the wrist. The incisions were made through healthy textures. The dressing was not removed for three weeks, when the wound was found perfectly healed, with only a little dried blood in the dressing.

2. J. C., æt. 19, admitted 14th June 1881. Syme's amputation at the ankle was performed for disease of the tarsus. The dressing was removed after a fortnight, as a matter of curiosity, not that it was required. A superficial abrasion at one corner alone remained. The dressing was renewed, and it was found healed in another week.

3. D. L., æt. 37, admitted 1st December 1881. In this case the patient was rapidly sinking from strumous disease of the right wrist, right ankle, and third toe of the left foot. The wrist and toe were treated, after amputation, by the method I have described, while the ankle was otherwise dressed. The amputation at the ankle was performed through putrid sinuses, the others through fresh surfaces. These last were healed absolutely when the dressing was taken off for the first time three weeks after operation. As sometimes occurs, however, the general health of the patient having become temporarily disordered, I think by continued discharge from the ankle, ulceration of the cicatrix to a slight

extent occurred in both three or four weeks after they had healed.

4. R. S. æt. 18, admitted 20th March 1881. Syme's amputation at the ankle. This case, already referred to as being delayed by Neuber's drainage-tube, was only dressed once at the end of a fortnight.

5. J. P., æt. 38. A patient of Dr T. Balfour. Excision of the mamma was performed for scirrhus. The wound was found absolutely healed when it was dressed after ten days.

6. G. B., æt. 15, admitted 1st February. Amputation at the upper third of the arm for injury. It had been caught between the rollers of a printing-machine. Examined in three weeks, it was found absolutely healed, with the exception of a surface about the size of a pea, where plainly a portion of bruised skin had sloughed. In another week that also had closed.

7. M. P., æt. 46, admitted 28th February 1882. Amputation at the wrist-joint was performed for gangrene of the hand from obstruction of the brachial artery. It was examined in fourteen days, because she felt "as if there were discharge in the dressing." There was none. It had all but healed, and was absolutely united when we saw it again in another fortnight.

8. A. B., æt. 16. Amputation of the foot for injury was performed by Syme's method, 19th November. The stump was dressed the same evening, and a drainage-tube which had been inserted was removed. It was not again looked at till the 21st day, when it was found healed.

9. Mrs E. W., æt. 46. Excision of the mamma for scirrhus was performed 12th May. It was dressed next day, on account of slight oozing through the dressing. It was found healed at next inspection on 26th May, and she went back to Shetland 30th May.

10. J. I., æt. 12. Excision of the lower end of the humerus on account of old dislocation was performed on 23rd May. A small indiarubber drainage-tube was inserted at the operation, but was removed next day. The wounds were absolutely sound at next inspection on 5th June.

But a method is to be judged as much by its failures as by its successes. I mention all my remaining cases in two classes—1st, those in which the success was not complete, but in which the patients made exceedingly good progress; 2nd, those in which, after trial, the method was abandoned.

I.

1. G. M'L., æt. 53, was admitted to the Infirmary 15th March 1882, suffering from extensive ulceration of the leg, for which I performed amputation below the knee. At the point of amputation all the tissues were much swollen and œdematous. It was necessary to change the salicylic wool five times in six days on account of the serous exudation having penetrated the dressing.

It daily diminished in quantity, however, and the sixth dressing did not require removal for fourteen days, when the stump was found healed. There was no rise of temperature whatever.

2. Mrs M. W., æt. 36, had been treated in the Infirmary for many weeks on account of disease of the knee-joint, at first with promising results. Subsequently, however, it became evident that she was gradually sinking, partly from the discharge from the knee, partly from progressing phthisis. I accordingly amputated through the diseased tissue, where a sinus already existed, by Mr Spence's method. For ten days the dressings had to be changed every second day on account of the flow of bloody serum. After that the much longer intervals of ten days or more intervened, and the healing, though slow, was ultimately well accomplished. The temperature, which before the operation had been habitually as high as 101° each evening, never rose above 99° after the operation.

3. D. J., æt. 8, 13th March.—In this case I excised the knee-joint on account of progressive disease, and because it was fibrously anchylosed at right angles. The skin was unbroken at the time of operation, but we failed to maintain the parts aseptic. Nevertheless the dressing remained unchanged for a week, and only required reapplication at long intervals. There was some increase of temperature for three or four days, and pus was found in the dressings at each inspection. It has healed soundly, though slowly.

4. Mrs W., æt. 46.—Excision of the mamma for scirrhus was performed on 10th May. In this case so much skin had to be removed that buttons with catgut had to be used. Micrococci were found in the discharges, and the dressings required renewal five or six times, but it healed quickly, and temperature never rose above 99°·5.

II.

In the following cases the dressing was abandoned at various dates after operation:—

1. An amputation at the ankle for severe injury of the foot.
2. Amputation at the ankle by the lateral flap, consecutive to excision of the os calcis.
3. Excision of the wrist.
4. Operation for strangulated inguinal hernia.

In two of these cases, Nos. 2 and 3, we failed to correct the putrescence which existed in the tissues at the time of operation; in the other two, although the skin was unbroken, sepsis also occurred. All did well. Having ascertained the presence of bacteria, and observing that the parts were somewhat red and swollen, I introduced drainage-tubes and applied a boric poultice. In a period varying from a few days to a week these symptoms disappeared, and the dry dressing was resumed and continued, with long intervals between the renewals, until healing took place.

These cases constitute, as yet all my experience of the method.

If we include the strangulated hernia, the number of important operations was—

I. With perfect healing, 14, viz.,—
3 Herniotomy.
3 Amputations at ankle.
2 Amputations in forearm.
1 Amputation at wrist.
1 Amputation of upper arm.
3 Excision of mamma.
1 Excision of elbow.

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II. With almost perfect healing, *i.e.*, in which dressings required renewal, although very rarely, and the general and local symptoms were absolutely good, 4, viz.,—
1 Amputation of thigh.
1 Excision of knee.
1 Amputation of leg.
1 Excision of mamma.

III. In which failure occurred, *i.e.*, the dressing was abandoned on account of inflammatory action, 4, viz.,—
1 Strangulated hernia.
1 Excision of wrist.
2 Amputation of ankle.

Three other major operations were since performed through pre-existent sinuses, and dressed in this manner. In one, in which asepsis was maintained, the dressing required renewal several times, though at long intervals, and it was continued throughout. In the other two putrefaction continued, and the dressing was temporarily abandoned.

The deductions I would draw from my observations are:—

I. That when we succeed in preventing sepsis at the operation we can, by this method rely on singularly simple and favourable progress, with total absence of fever, with freedom from pain, and with great rapidity of healing. It is proper to be exceedingly careful in the arrestment of hæmorrhage; but even did a little reactionary oozing occur, it is only necessary to renew the dressing once, or, as I did in some of these cases, to put on an additional layer of wool.

II. That should sepsis lead to inflammatory action, it is necessary temporarily to abandon the dressing.

III. That even in septic cases it is often advantageous to continue it throughout if there be no inflammation, or recur to it when inflammation has subsided, because it is a good excipient for discharge, because it tends to diminish the amount of pus, and because it aids in keeping the part at rest.

IV. That in fresh wounds so situated that they can be firmly and equably compressed the introduction of materials to secure drainage is usually unnecessary, and that if the drainage-tubes be introduced they should be removed in twenty-four hours.

V. That sepsis is less apt to occur by this method, as it avoids the risks which attend changes of dressing and movements of drainage-tubes, which, in my experience, are more fruitful sources of failure than even the original operation.

ARTICLE V.—*A Case of Complicated Fatty Tumour.* By ED. FOWLER SCOUGAL, M.A., M.B., L.R.C.S. Ed., Newmill, Yorkshire.

A CASE of fatty tumour, pure and simple, is of such a commonplace character and so wanting in general interest as hardly to merit recording in a public journal. The following case, however, both from the situation of the tumour, from its complications, and from the mode of treatment used prior to operation, presents such features as may make it of interest to others than the operator.

Mr M. H. B., æt. 46, a strong and healthy-looking man, came on February 19th to consult me as to a swelling in the front of the upper part of his right thigh. The swelling, he said, was growing more quickly of late, and was causing considerable pain.

It is fully two years since the patient first noticed a small swelling where the tumour now is. It grew very slowly and without pain, and about nine months after it first appeared he was advised to paint it with iodine. He did so, but apparently without any good result. Twelve months ago he went to Redditch, in Lancashire, to consult a celebrated "tumour-doctor"—a quack—who plies a very active trade there. The usual cauterizing course was adopted, the skin being first destroyed, and then attempts made to eat away the tumour. After enduring seven months of what he calls frightful agony, and finding that the tumour was not disappearing, the patient gave up the quack's treatment, and up to the time of his consulting me nothing more was done. Eighteen months ago he began to wear a truss for a hernia, the first appearance of which he cannot recall. He did not wear the truss more than two months, as it caused him uneasiness, and since he left it off he has never worn another. The continued increase of the tumour, considerable pain, and a commencing swelling of the right leg, caused him to seek further advice.

On examining the tumour, I found a swelling as big as a large cocoa-nut occupying the upper and inner part of the right thigh. The hernial portion of the tumour could be easily distinguished from the rest, the former being to the touch somewhat tense and elastic, the latter soft, semi-fluctuating, and rather lobulated. The hernia was easily reduced, leaving a tumour as big as a good orange flattened out, and this was diagnosed as a fatty tumour. The skin over the greater part of this was quite cicatricial in character, and in advising removal of the tumour by operation, I warned the patient that most likely this skin was adherent to the tumour, and, even if it could be dissected off, would probably die and slough away, thus retarding the healing of the wound and enlarging the remaining cicatrix. The swelling of the leg was accounted for by the pressure of the tumour on the femoral vein, the pain by pressure on the anterior crural nerve. The pressure was undoubtedly increased by the tense, unstretching character of the cicatricial skin.

On the 27th February, assisted by my friend Dr Thorp, who kindly and skilfully gave chloroform, I removed the tumour, the hernia being, of course, previously reduced. As we predicted, we found the skin and tumour firmly adherent over a considerable portion. These were with difficulty dissected apart, but otherwise the operation was comparatively easy. The dressing employed was lint soaked in carbolic lotion (1 to 40) and covered with gutta-percha. In two days it was evident a portion of the skin as large as a crown-piece would slough. In four days more this slough separated, and then the wound was dressed with carbolized vaseline (1 to 15) till it healed, which was on March 29th, when the cicatrix was almost linear in appearance. The patient never had a bad constitutional symptom. For his hernia a proper truss was ordered, which he now wears with comfort.

The chief points of interest in the case seem to me to be these—the somewhat rare situation of the tumour, the hernial complication, and the attempted removal by caustics. It is a matter of some surprise that the quack, in his energetic application of the caustic, never injured the hernia. The failure of the caustics to remove the tumour in this case, taken along with the fact that within the comparatively short space of eighteen months I have seen or heard of other four cases of fatty tumour on which caustics also failed, suggests to my mind this important question, Has fat a greater power of resisting mineral caustics than other tissues? The case further illustrates the truth of the saying, that we should avoid using such means of getting rid of a simple tumour as will render a subsequent operation tedious, if not difficult and dangerous. Finally, in view of the controversy raging in England at present over anæsthetics, it may be mentioned that in this case the chloroform was administered for about thirty-five minutes, and was borne remarkably well, causing no trouble or anxiety at the time, nor any inconvenience afterwards.

ARTICLE VI.—*On Some Points of Interest in Connexion with a Case of Drowning in which no Water was found in the Stomach.* By KEITH NORMAN MACDONALD, M.D., F.R.C.P. Edin., L.R.C.P. Lond.

THOUGH the presence of a considerable quantity of water in the stomach after death, under certain conditions, is strong presumptive evidence in favour of death by drowning, yet it is well known to medical jurists that this is not an invariable sign, and it occasionally happens, as the following case well illustrates, that the position of the body when placed in that element may render it almost impossible that any water could enter the stomach, hence it is of some importance that this fact should be borne in mind in conducting medico-legal investigations.

On the 8th of February 1882 I received a warrant from the Sheriff of Fife to examine the body of Charles Thomson, a child aged 23 months, who was found apparently drowned, head downwards, in a tub or butter kit containing 6 inches of water, in a wash-house at Tayport, at 1 P.M. of the previous day, and supposed to have been placed there by his mother—a young unmarried woman aged 24—in a fit of despondency.

The post-mortem examination was conducted by Dr Blair of Tayport and myself in the mother's house, and in the presence of two policemen, members of the Fife constabulary, 24 hours after death, when the following signs were revealed.

The body, which was that of a highly developed and well-nourished child, apparently about 2 years of age, presented a pale, tranquil, and placid countenance, mouth, nostrils, and eyelids, slightly open, pupils dilated, tongue normal. Rigor mortis well marked. "Cutis anserina" slightly marked over the chest, arms, thighs, and legs. There were livid patches of discoloration over the back, arms, and legs, more marked on the right side of the body; the testicles were retracted, but the penis was normal. On turning the body round to view its posterior surface, about one teaspoonful of clear fluid escaped from the nostrils. No frothy water or mucus to be seen about the mouth and nostrils, though some was noticed about the mouth when the body was found in the water on the previous day. The fingers were slightly flexed, but not clenched, and there were no signs of external violence having been applied.

On making an incision from the chin to the pubic symphysis and reflecting the integuments and muscles, a layer of adipose tissue half an inch thick was found to exist throughout. Position of abdominal organs normal. Diaphragm on each side arched to between the level of the fifth and sixth ribs.

Chest.—On removing the sternum, the pleuræ appeared normal; the lungs were slightly œdematous, and on compression some frothy mucus[1] issued from the nostrils. The lung substance also contained a large quantity of watery froth tinged with blood, and on section appeared gorged with dark fluid blood. The mucous membrane of the trachea also contained some watery froth and presented a reddish, glistening appearance, but nothing unusual was observed about the pharynx and œsophagus. The lungs at their apices and posteriorly were of a dark purple colour and felt crepitant to the touch. The vessels of the pericardium were congested. The left ventricle of the heart was firm, contracted, and empty, and the right ventricle relaxed in its walls, and nearly filled with dark fluid blood. Valves and coronary bloodvessels normal.

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[1] Dr Francis Ogston, junr., in the *Edinburgh Medical Journal* for April 1882, p. 869, has drawn attention to the "frothy mucus" of the drowned as described by medico-legal writers, and points out that it is only watery froth, as may easily be demonstrated by any one who takes the trouble of placing a small quantity of it upon a knife and touching the bubbles with a needle, when it will be found that they are easily made to collapse, leaving only watery fluid without any residue of mucus.

Abdomen.—Omentum and peritoneum normal. Intestines filled with flatus; spleen, liver, and kidneys highly congested; the stomach nearly empty, containing only a small quantity of a glairy, tenacious mucus—no water. This fact is interesting from a twofold point of view—first, from the position of the body in the water preventing any entering the stomach; and, second, from the fact that it afterwards transpired in evidence, and on the mother's confession, that the child had been fed on bread and water at 9 A.M., and was put into the tub of water about 11 A.M. of the same day, thus showing that its digestion in the stomach was completed in two hours. The gall-bladder was nearly full of bile, the urinary bladder nearly empty, containing only about 2 drachms of urine. The small and large intestines contained some fæcal matter of normal appearance.

Head.—The scalp was almost bloodless. On removing the skull-cap the dura mater with its injected bloodvessels was found adherent to the vault of the cranium along the course of the longitudinal sinus, which was filled with dark fluid blood. The vessels of the pia mater appeared much congested, and about half a drachm of serum was found in each lateral ventricle. The choroid plexus presented a fringe of congested bloodvessels, and on slicing the hemispheres of the brain from above downwards numerous bloody points were observable throughout the white substance, from which drops of blood exuded on pressure. The cortex of the cerebellum was slightly reddened throughout; consistence of brain generally good; no fluid at the base of the cranium; fourth ventricle empty; no other change of any consequence.

From the foregoing appearances we arrived at the conclusion that the cause of death was asphyxia from drowning, and gave in our report accordingly.

Turning now from the above sad death to the state of the unfortunate mother, Helen Thomson, who was tried before Lord Deas for the murder of her child at the Perth Circuit Court on the 12th of April 1882, it was brought out in evidence that her mother was confined in a lunatic asylum in December 1851 for about 15 months, and six years prior to Helen Thomson's birth, and that she is at present an inmate of the Fife and Kinross Asylum. I have also been informed that her father was insane, but of this I have no direct evidence. On the 13th of October 1881 she visited her mother at the asylum, who taunted her for having been the cause of all her troubles, and this appears to have made a great impression upon her mind, for from that date her intimate acquaintances noticed a change in her character. From having been a lively and gay girl, fond of singing, she became morose and despondent, and, as she herself remarked to one of the witnesses, would "never sing again." There was another cause, however, to account for her melancholy. About the end of October she ceased to menstruate, and having again become pregnant, this no doubt produced a powerful impression upon her mind. She continued her work as usual as a mill girl, but, according to the evidence of some of the witnesses, she became slovenly and dirty in her habits, would seldom prepare any food for herself, and frequently took to her bed when she came home from her work, while others maintained that they could see nothing the matter with her. Her next door neighbour, a Mrs Pye, mentioned in her evidence that early in January 1882 she was the victim of delusions, that she came to her one morning about the 14th of that month and said that she had killed her mother. "At the time she was trembling very much, and was also greatly excited," and a few nights afterwards she came again to her house between two and three in the morning, and said that she "could not rest in her bed" as "she thought there were things that went through the house," and stated that she "could not tell whether they were men or beasts." On a previous occasion she observed several scratches on the child's neck, and spoke to her on the subject, but got no answer, and she noticed that "there was a curious stare in her eyes." Her brother, also, a lad of about fifteen years of age, deponed that early on one Sunday morning in winter, when he was living with her, she went out barefooted, and when she returned about twenty minutes later he asked her where she had been, but she would not tell. He left the house on last Handsel Monday in consequence of fright, "as she set up such wild eyes."

When I first examined her on the 8th of February 1882, I found her in a melancholic and despondent state, and as I found it impossible to induce her to answer questions or to hold any conversation, I certified her at the time as being of unsound mind and unfit to undergo a judicial examination. I further certified, on the 14th idem, that I was still of the same opinion regarding her mental state. During this time she was under my observation at the Cupar Jail, and up to within a few days of her trial; but it is right to observe that though she was so reticent in my presence, she occasionally talked freely to the matron and female warder, and stated that it was very cruel of her to have put the child into the tub of water—occasionally wept, and once remarked that she wished she was dead. On the 17th of February, nine days fter her admission into the jail, she entered freely into conversation with me, and confessed the whole circumstances of the murder in a clear and connected manner, but did not exhibit the slightest emotion on the death of the child being mentioned, nor did she take any interest in her own condition. She remembered having fed the child on bread and water at 9 A.M. of the 7th February, and putting it into the tub of water about 11 A.M. on the same day, but did not know why she did it, and could not give any reason, though she admitted that something had prompted her to do so. During the whole period of her incarceration I was unable to make out that she laboured under any delusions. At the same time, her manner appeared silly, and altogether out of proportion to the gravity of her position.

She was examined by Dr Turnbull, Medical Superintendent of the Fife and Kinross Asylum, on the 1st of March last, who found her weak-minded but not insane.

At her trial she pled "not guilty;" and after evidence was led for and against the plea of insanity, the jury brought in a verdict of culpable homicide, with a strong recommendation to mercy on account of the state of her mind, and she was sentenced to seven years' penal servitude.

ARTICLE VII.—*Case of Intestinal Obstruction Treated by Opening the Abdomen.* By JOSEPH BELL, F.R.C.S. Ed., Surgeon to the Royal Infirmary.

IN Dec. 1881 I was asked to see E. S., æt. 16, a servant to an invalid lady, on account of vomiting and abdominal pain.

The symptoms had lasted for three days, had been supposed the result of indigestion, and had been treated by the administration of several pretty smart purgatives, salts, castor oil, etc., all with no result except the increase of the vomiting and pain.

The girl was well nourished, very quiet and patient, exhibited no symptoms of inflammation, pulse and temperature were both normal. Nothing was to be made out by abdominal manipulation except a small, deep-seated point of extra-resistance about 1½ inches to right of mesial line of abdomen, just below level of umbilicus. There was no special tenderness there or in flanks.

Menstruation, always somewhat painful, was impending. I at once took a most unfavourable view of the case, fearing some obstruction; ordered solid opium in pill, a grain every fourth hour, no food except ice with an occasional teaspoonful of milk, and hot fomentations to the abdomen.

Next day the patient was much better; the vomiting had not returned, the pulse and temperature were normal, and the pain was almost gone. Menstruation had appeared. Still I was not satisfied, for the sense of resistance at point mentioned above was still to be made out, and with the exception of one or two slight indications of flatus, nothing had passed.

Enemata were now ordered, with the effect of clearing out the lower bowel, but no more. Next day vomiting had again commenced, and no improvement in other respects; so, as there were no facilities for nursing and treatment in the house, I sent her into the Infirmary, under the care of my colleague Dr Affleck.

He saw her at once, and agreed in the diagnosis as being almost a certainty. Still the symptoms were so little marked, and the constitution was so little affected, pulse and temperature remaining normal, that two days more were allowed to pass, treating the case by injections of oil per anum, and bismuth and opium by mouth. Galvanism was also fairly tried.

On Friday, 30th Dec., with Dr Affleck's approval, the following operation was performed, with antiseptic precautions:—An incision about 3½ inches in length was made in middle line between umbilicus and pubes; the bleeding points were secured by torsion and Pean's forceps. The peritoneum was easily recognised and opened, and just below the navel a coil of intestine was found reddened, swollen, and already coated with lymph. This I cautiously drew down out of the wound, and found, first, that a sharp turn or twist was interrupting its lumen. This easily untwisted, as being due, probably, to the inflammation only. I next came on an intussusception extending to about 4 inches. It was by no means firmly impacted, non-adherent, and was easily reduced; it probably was due to the inverted peristaltic action. Still the coils showed evidence of further complication, so, passing my hand downwards to right iliac region, I easily recognised what must have been the initial mischief, namely, a tight round band, 1½ inches in length, passing from one coil of intestine to another, and thus forming a loop or noose, into which another coil had passed when empty, had become filled, and then could not return. This loop I divided easily enough, and secured the bleeding end with a catgut ligature.

After clearing out the peritoneum, and seeing that no hæmorrhage was going on, I then stitched up the wound in usual manner, with the usual dressings. The patient expressed herself as much relieved from pain on coming out of the chloroform narcosis, but towards evening her strength failed, limbs became cold, and she survived the operation little more than twelve hours.

This case was interesting as being one in which the diagnosis was completely verified, and I cannot help thinking that had we operated sooner the fatal issue might possibly have been averted.

Part Second.

REVIEWS.

A Treatise on Diseases of the Nervous System. By JAMES ROSS, M.D. 2 Vols. London: J. & A. Churchill: 1881.

The Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D. Edinburgh: Maclachlan & Stewart: 1882.

DR ROSS is a man already well known as a logical thinker and an able writer. Very early in life he made his mark by his *Graft Theory of Disease,* which was much admired by the late Dr Anstie for its careful reasoning and pleasant writing. Of late years Dr Ross has been attracted to the study of nervous phenomena, and has published several very excellent papers on diseases of the nervous system. The outcome of this is these two volumes, which together form one of the most elaborate and comprehensive and yet concise treatises on diseases of the nervous system in the English language. This work is profusely illustrated, and the illustrations are remarkably good and instructive. Dr Ross begins with an introduction on the structure and functions of the nervous system; then follows a chapter on general etiology, and one on general symptomatology. After these the æsthesioneuroses, the kinesioneuroses, and the trophoneuroses are treated of, followed by general pathology, diagnosis, prognosis, and treatment. Then follows the special pathology of the nervous system, which naturally constitutes the larger portion of the work. This part is very carefully done, very concise, and yet wonderfully complete; and though the condensation has sometimes been carried almost to the verge of baldness, there is scarcely any subject, and certainly no important subject, connected with disease of the nervous system in regard to which information is not to be obtained in these volumes, both as to diagnosis, prognosis, and treatment. Naturally Dr Ross owes much to recent German and French writers on diseases of the nervous system, and of this he gives a general acknowledgment in the preface. But there are many parts where no authority is mentioned, which yet are obviously borrowed, and in one of these Ross has fallen into a most amusing mistake. "The case of Sterne," he says, "who saw distinctly the satellites of Jupiter with the naked eyes, is a good example of optic hyperæsthesia" (p. 313, vol. i.) Sterne—there is only one Sterne—was a very clever and amusing fellow, but we never before heard of his sharp sight, and as he died in 1768, this is just a statement which ought to have a reference to confirm it. Unluckily for Ross, we have accidentally fallen upon this reference. Here it is: "Ich erinnere nur an die Beobachtungen, dass Sterne siebenter Grösse und die

Jupiterstrabanten mit blossem Auge deutlich erkannt wurden" (Eulenburg, *Lehrbuch*, etc., S. 321). The fact is quite as remarkable as before, but it loses much of its interest with the loss of the personality, "Sterne" being not, like "David," a man's name, but only the German for "stars," "siebenter Grösse," of the seventh magnitude. Ross must have been sorely exercised in his mind with this "siebenter Grösse." What on earth decided him to cast it aside? and what was our old friend Graham Steell about when he so carefully read the proofs and yet missed this most excellent joke?

Having thus shown this work to be good enough, in our opinion, to be able to stand a joke, we have the greater confidence in expecting to be believed, when we say that there is no other work on the same subject in the English language more likely to be useful and instructive to both student and practitioner.

Dr Bramwell's volume is of purely an educational character. It is about thirty years since Brown-Sequard published his experimental researches, forming the first step in the modern investigation of the structure and pathology of the spinal cord. Since that time these subjects have been always more carefully taught than formerly, more or less following and improving upon Brown-Sequard's methods and teachings. And in Edinburgh, under the influence of Professor Hamilton, now of Aberdeen, the examination of the microscopic pathology of the cord and brain has been carried out in a most careful and elaborate manner, so that no student has for years left this school without a boxful of microscopic preparations the like of which it would be difficult to find anywhere else, and which twenty years ago were not to be had at all. This work of Dr Bramwell's is the result of this modern departure in teaching the pathology of the cord. It may be very profitably regarded as heads of lectures with accompanying diagrams. It would be doing both Dr Bramwell and his book an injustice to take it in any other light. It proceeds in the right way. It first of all gives us the anatomy and physiology of the spinal segment, next the pathology of the spinal segment, after which there is a chapter on the clinical examination of the cord, including the generalities of diagnosis, prognosis, and treatment, and this is followed up by a tabular classification of the diseases of the spinal cord. Considering that all this is gone over in 300 pages, 49 of which are full-page illustrations, many of them of great beauty, while numerous woodcuts are scattered throughout the rest of the letterpress, it is, we think, doing this work no injustice to say that it is only valuable as an introduction to the subject of which it treats. But it is a useful introduction, inasmuch as it gives a fair though very concise *résumé* of the present state of opinion as to the physiology of the cord and the manner in which ordinary physiological manifestations are altered by disease, as well as to the best methods of detecting these altered manifestations. At present the latter portion of the work is so bald as to be of no practical value. By-and-by, when accumulated experience shall enable Dr Bramwell to speak with greater fulness and more authority on the matter, this portion of the work will no doubt be expanded to an extent more commensurate with its importance than it at present possesses. In the meantime we accept the work as an instalment of what we may expect, a work which will then be worthy of the great school with which the author is connected.

Lectures on Diseases of the Nervous System, especially in Women. With Five Plates. By S. WEIR MITCHELL, M.D., Physician to the Orthopædic Hospital and Infirmary for Diseases of the Nervous System, New York. London: J. & A. Churchill: 1881.

DR WEIR MITCHELL has long been known to neurologists in this country as a shrewd observer and original clinical investigator, and is justly famed for the success which he has attained in the treatment of hysterical paralysis and other allied affections. We were consequently prepared to derive both profit and pleasure from the perusal of this work. Nor have we been disappointed. It consists of thirteen lectures, and deals chiefly with the rarer nervous affections of women. It literally abounds in rare and interesting cases, which are described in a highly graphic manner, and teems with original observations and valuable practical remarks.

In the first lecture the author treats of hysterical paralysis, and in speaking of these cases he remarks, "There were once no cases so much dreaded by me. There are now none to which I go with so much pleasure. I am sure that I treat them to-day with a success I could not once have gained; and I think what success I have had has been due to more exact ideas as to what is needed, and that unflinching purpose and action which grow out of distinct views."

A case of hysterical paraplegia is then detailed. The plan pursued in treating this case was one, the author tells us, "to which I groped my way a few years ago. My patient was very thin-blooded and yet very fat. Such cases, for some reason not clear to me, are more hard to redden than those of thin people in like states of blood. But if you can safely cause these persons to lose flesh, as they are helped to remake it you may sometimes redden them with ease; and to raise the number of blood-globules to the normal is usually to lift a woman above that low level of health which is one, at least, of the factors of hysteria. Mrs C. was, when first seen by me, sitting up most of the day, and sewing, writing, and the like when not too nervous. I put her in bed, and, employing as a diet milk alone mixed with a little rice-water or barley-water, I began to lessen the amount given, until, using less than a quart a day, her weight fell off at the rate of about a quarter to half a pound a day. When she showed signs of weakness I added beef-soup to the diet for a day or two, and thus in a month brought down her weight some twenty-four pounds. This could not with safety be so quickly done unless the patient were kept inert and supine. Then the milk was by degrees increased. Then beef and vegetables were added, malt extract was used before meals, a little red wine or champagne was allowed, and iron was freely given, the feeding being frequent. When I made the increase in diet I began to arouse sensation by the use of the wire brush and induction currents.

"Now, in common palsies or in those from nerve wounds, feeling is apt to come back first, motion last; but in hysteric palsies, as I think, the gain in active motion may go on, and even reach a useful amount, while yet the lack of feeling rests as it was when the treatment began. Just this change took place in Mrs C. She grew brighter and more happy, gained in colour and flesh, and began to move her legs. In a month after she reached full diet she could walk with some trouble, and about this time the sense of touch showed signs of betterment; but the power to feel pain was unchanged, and in fact was never complete, in the left leg.

"Next began a plan of steady, urgent calls upon her for increase of the use of her limbs, so that before long she was able to walk out of doors. At this point I fear there was a mistake made in the treatment. Thinking the battle won, I pushed her too hard, and one day, after walking much farther than usual, she felt an excess of fatigue. Returning home, she gave out of a sudden, and the morning after was hardly able to stir either leg. I may here pause to repeat as to this matter a warning I have often given. It is to urge on you the utmost care as to allowing a hysterical patient on the way to health —I mean, of course, one who has lost power—to do more each day than fulfil the ordered task of that day. Most cases of hystero-palsies are easily tired, and it is almost sure to be the case that they cannot make a long effort without showing the effect in some way; moreover, the mental results of extreme tire are to be feared, because any positive, real sensation is apt to be made a peg, so to speak, on which the patient may hang the complement of a larger and less real sensation."

This quotation will give our readers some idea of the manner in which our author handles his subject, and of the graphic descriptions which he places before his reader.

Hysterical hemiplegia is next considered, and we observe with interest that, in speaking of the so-called "metal cure" of hysterical semi-anæsthesia, our author says, "I have tried it over and over again; but although from it, or from glass, cork, wood, or what not, I have obtained many times a slight local change in feeling, I have never seen this complete, and have never once witnessed the phenomenon of transfer of the analgesia or anæsthesia to the opposite side—a phenomenon which seems to be undeniably frequent in the hands of as admirable an observer as Charcot. I ought to add that my colleague Dr Sinkler has not been in this matter more fortunate than I, although he has, I believe, studied several cases from this point of view."

Dr Mitchell has not seen the abrupt cures in cases of hystero-hemiplegia and hystero-paraplegia with loss of sensation which are described by some writers. The cures of these cases are, he says, to be made by a slow, steady, hopeful training of the will powers through every-day effort, which needs some caution not to err in the way of excess. In speaking of another patient he says, "It was not a brilliant case, and it taxed nurse and doctor to the uttermost—a case urged and scolded, and teased and bribed, and decoyed along the road to health; but this is what it means to treat hysteria. There is no short cut, no royal road."

Space forbids us to notice the succeeding twelve lectures. We must content ourselves with again expressing our very high approval of the work. We would strongly recommend our readers to buy it and to peruse it for themselves.

A Treatise on the Diseases of the Nervous System. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and of the Nervous System in the Medical Department of the University of the City of New York, etc., etc. Seventh Edition. London: H. K. Lewis.

A WORK which has commanded so large a share of professional confidence as to reach a seventh edition in the short space of ten years has placed itself beyond any ordinary criticism, and needs no special recommendation at our hands. It will be sufficient to point out in what particulars this edition differs from its predecessors, and to say that the general excellence of the work is fully maintained.

This edition contains about forty pages more than the last, notwithstanding the fact that the chapters on insanity, which formed a considerable portion of former editions, have been omitted. (The author tells us in his preface that he is engaged in the preparation of a special treatise on insanity, in which the physiology and pathology of the mind will receive fuller consideration than could be given in a book combining the whole subject of neurological medicine.) The increased size of this edition is chiefly due to the addition of chapters on Myxœdema (though the advisability of discussing that condition in a work on diseases of the nervous system, is, we think, very doubtful), on Syphilis of the Brain, Spinal Cord, and the Nerves; on the Symptomatology of Cerebral and Cerebellar Lesions; and a new section on Diseases of the Sympathetic Nervous System.

The author states that he is indebted to Dr Labadie Lagrave, the accomplished editor and translator of the French edition, for much new matter—the chapters on Nervous Syphilis, on the "Symptomatology of Cerebral Lesions," and on the "Pathology of the Sympathetic Nerve," being literal translations of his articles on these subjects. We may add that these articles by Dr Lagrave fully hold their own with the other portions of the work.

Although we differ from not a few of Dr Hammond's statements and views, we can cordially recommend the book as a whole, as one of the most valuable works on diseases of the nervous system which has yet been published.

Epilepsy and other Chronic Convulsive Diseases: their Causes, Symptoms, and Treatment. By W. R. GOWERS, M.D., F.R.C.P., Assistant-Professor of Clinical Medicine in University College, Physician to the National Hospital for the Paralyzed and Epileptic, etc., etc. London: J. & A. Churchill.

THIS, like all Dr Gowers's work, is of first-rate excellence. Based as it is on 1450 cases which have been under the author's own personal care, it contains an immense amount of original matter, which is admirably worked up and lucidly placed before the reader. The more purely theoretical and scientific parts of the subject are exhaustively treated of, while the practical and therapeutical sides have received their full share of attention. The book represents a vast amount of laborious investigation and thought, and is the most complete account of epilepsy with which we are acquainted.

A Treatise on the Practice of Medicine: for the Use of Students and Practitioners. By ROBERTS BARTHOLOW, M.A., M.D., LL.D. London: H. K. Lewis: 1880.

DR BARTHOLOW was formerly Professor of Practice of Medicine and of Clinical Medicine in the Medical College of Ohio; he is now Professor of Materia Medica and Therapeutics in the Jefferson Medical College of Philadelphia. He is also author of a greatly esteemed work on materia medica and therapeutics, to which this is intended to be a companion volume. His pictures of disease are drawn from his own clinical experience, while in the matter of treatment he is without the slightest sympathy for the therapeutic nihilism so prevalent of late years, which seems nowadays to be tending towards an equally absurd system of specifics.

Bartholow's pathology is distributed, at the risk of some repetition, among the various diseases of which he treats. His pictures of disease are graphic and accurate; and if we have any fault to find with his therapeutics, it is not that there is any absence of explicitness in his views. This work is well written, concise, fairly abreast of the present state of science, and in respect of therapeutics it is rather in advance of most text-books. But what a paradise the author must live in to justify him in utterly ignoring alcoholism and delirium tremens!

Monatshefte für Praktische Dermatologie. Anzeigeblatt. Redigiert von Dr H. VON HEBRA, Wien; Dr O. LASSAR, Berlin; Dr P. G. UNNA, Hamburg. No. 1. Marz, 1882.

Monthly Sheets of Practical Dermatology. Specimen Number. Edited by Dr H. VON HEBRA, Vienna; Dr O. LASSAR, Berlin; Dr P. G. UNNA, Hamburg. No. 1. March, 1882. Hamburg and Leipsic: L. Voss.

IN the preface to this new journal it is stated that it is meant as a medium for the publication of short original papers on skin diseases and syphilis of a strictly practical character, more elaborate papers having already special organs. The editors think that from want of such a journal much instructive material both in clinical and private practice is lost, while in its pages the practitioner, instead of wading through innumerable journals, will find collected all actual advances in dermatology and syphilis. This will be provided in reports culled from the literature of all languages. The reader of the *Monthly Sheets* will thus possess, as far as possible, an exhaustive year-book of these subjects.

Among the contents are "Nerve Alterations in Lepra Anæsthetica," by G. and F. E. Hoggan; "The Cure of Lichen Ruber without Arsenic," by Unna; a review by Schulz of Bonn of "The Grounds on which the Therapeutic Value of Arsenic in Skin Diseases is Based;" a summary of papers by Leloir and Sigmund Meyer "On Changes in Cutaneous Nerves in their Relation to certain Skin Diseases," etc. The list of those who have promised to contribute is already respectable, and the journal starts under favourable auspices, and we hope will prove a success.

Syphilis and Local Contagious Diseases. By BERKELEY HILL, M.B. London, F.R.C.S. London: Smith, Elder, and Co.: 1881.

THIS work, although called a second edition, is really a new book, having been entirely re-written. It is the most exhaustive treatise on the subject that has ever been published in this country, and well sustains the author's wide reputation. We are glad to find that the author adheres to the dual theory of venereal contagion, which at present is not in favour with the English school of syphilologists. The chapter on contagion is specially interesting. The moot point regarding the probability of a syphilitic father directly infecting the fœtus without at the same time or anteriorly infecting the mother is thus referred to: "But there is no doubt that the escape of the mother—that is, the direct infection of a child by its father—is not established as a clinical fact, nor is the infection of the mother by her syphilitic child thus far proven. . . . In all the instances which have been satisfactorily reported her escape is not real. Commonly the mother has syphilis in the ordinary form."

The chapter on syphilitic diseases of the nervous system has been undertaken by Dr W. R. Gowers, and he has admirably performed his task. It is a very valuable portion of the work. The question of prophylaxis has been carefully considered, in connexion with which will be found a summary of the effects of the Contagious Diseases Acts from the standpoint of a warm supporter of the Acts. Local sores, gonorrhœa, and accessory venereal disorders are fully described. In addition to minute directions for the treatment of syphilis and venereal diseases generally, there is a useful list of formulæ at the end of the book. The book extends to 614 pages, and if it has a fault it is its size; but this results from the exhaustive nature of the work, not from any want of method in the arrangement. We recommend it cordially to the profession, not merely as a compendium of the author's valuable personal experience, but as containing very extensive and learned research into the whole literature of the subject, both foreign and British.

The Study of Dental Surgery and the Means Thereto. By JOHN TOMES, F.R.S. Read at the International Medical Congress.

THE teaching for the diploma of "dental surgeon," in conformity with recent legislation, is a matter beset with many difficulties. This is admitted on all hands. The treatment of dental diseases, like the treatment of all other so-called "regional" diseases, requires medical and surgical skill as much as the treatment of disease in any other organs of the body. Not only do their local disorders demand an acquaintance with operative surgery, but these disorders, as local manifestations of various constitutional causes, require to be met with all the knowledge of the fully equipped physician. To draw the line where dental surgery ends and general surgery begins is not easy, if it is possible. In this way the dentist would by rights require to be a recognised medical practitioner as much as the oculist or the accoucheur. The difficulty which presents itself here, however, is the necessity for an amount of mechanical training and dexterity which it takes years to acquire, while it is the possession of this mechanical knowledge that constitutes the distinctive and essential characteristic of the surgeon-dentist. Unless, then, the education of the dentist is to be more extensive, more costly, and more prolonged than that of the ordinary medical man, one of two courses must be adopted: either his medical and surgical education must be cut down to considerably less that that required for medical practice, or *surgical* dentistry must be left to such *bona fide* surgeons as choose it for a specialty, and *mechanical* dentistry be practised as a separate calling, as in the case of the oculist and the optician. This has for various reasons been as yet deemed impracticable. The compromise of a limited medical curriculum with a more extended and complete teaching in dental specialties has been the result —a scheme which Mr Tomes states to be so drawn up as to secure adequate knowledge and skill in practitioners, with a view to a certain difference in kind, but to equality in degree, between the compulsory education of the medical and of the dental practitioner. This has been adopted, and in the meantime promises to work well. Even, however, under this arrangement, as further stated by Mr Tomes, the results of professional examination fully establish the fact that the medical and the dental curricula cannot be fulfilled honestly in the same four years, and he contends that the graver portions of the medical curriculum can be taken up without disadvantage after the dental education has been completed. This seems as it ought to be. *Mechanical* dentistry, for one thing, should be allowed to be taken at the option of candidates, not only before commencing the medical department, but even before passing the preliminary examination. In such a case the after curriculum would be very much lightened, if the required number of years might not also be advantageously diminished. This is perhaps one of the most important and serious questions at this day presented by the dental curriculum, and one which is likely to occupy the attention of the meeting of the Medical Council during the present month. Mr Tomes's address is one of much interest, and we cordially recommend it to the perusal of all concerned in dental education.

Practical Chemistry Tables, arranged for the Chemistry Classes in the School of Medicine. By Dr DRINKWATER, F.C.S., Lecturer on Chemistry, etc. Edinburgh: Young J. Pentland: 1882.

THESE tables will be very useful to students of practical chemistry. They are well arranged and easily understood, and we believe will have a wide circulation.

The tables are arranged as follows:—1. Systematic Application of Tests for Bases; 2. Systematic Application of Tests for Acids; 3. Table for the Examination of the Sugars; 4. Table for the Examination of Alkaloids; and, 5. Outline Tables for the Clinical Examination of the Urine.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING VIII.

Wednesday, 7th June 1882.—Dr GEORGE W. BALFOUR, *President, in the Chair.*

The President said he felt sure the Society agreed with him in expressing deep regret at the death of their late President, Professor Spence. He was a man who was known, loved, and respected throughout his professional career in this city. His case was an example of what could be done by hard work and an honest rectitude of purpose. He moved that a statement expressive of their loss should be engrossed in the minutes.

I. *Dr John Duncan* showed TWO BOYS on each of whom he had performed excision of both knees. One of them was operated on about two years ago. The other was done more recently. In both there was almost exactly the same condition—previous disease, resulting in bad fibrous anchylosis, the heels being drawn up towards the buttocks, so that they walked on hands and knees. In the case of the first done there was a slight tendency for the knees to become bent, but that was readily overcome by bandaging and rest in bed. There was also a curious outgrowth of new bone on the inner side of the right tibia. They both walked a little stiffly as yet.

II. *Dr Heron Watson* showed (1.) A BULLET with a portion of the alveolar ridge of the lower jaw. Four weeks ago he was asked to see a boy in Edinburgh, who, while crow-shooting in Peeblesshire, had been wounded by a ball which was said to have glanced off a tree. He found an aperture in the lower lip. The incisor teeth and alveolar ridge had disappeared. The finger passed in below the frænum of the tongue as far back as the hyoid bone, in the middle line. Here the course of the wound deviated to one side, so that the finger could be passed between the respiratory apparatus and the sterno-mastoid. On carrying the hand down the side of the neck there was emphysematous crackling along the line of the sterno-mastoid. As there was no evidence of the presence of the bullet, he thought it prudent to leave matters alone, and did so for eight days. During this time discharge escaped into the mouth. The wound became inflamed and the neck swollen. He therefore cut down along the line of the sterno-mastoid and into the track of the wound, and found the ball and alveolar edge to the outer side of the sheath of the vessels and in the muscle. The result was satisfactory—no sloughing nor any other trouble occurring. (2.) An EPITHELIOMA OF THE TONGUE AND FLOOR OF THE MOUTH, removed from a patient the previous day. The disease was adherent to the bone, a considerable portion of which had in consequence to be sacrificed. The symphysis, the greater portion of both horizontal rami, and the whole of the tongue were removed. The thermo-cautery was used to separate the tongue from the hyoid bone and the soft parts around. [The patient has since made good recovery.] (3.) A PORTION OF THE LOWER JAW OF A YOUNG WOMAN, removed three weeks before for cystic disease. The cyst had been twice incised, and lint stuffed into the cavity to make it suppurate. When she came under his care the disease was in the region of the lower molar teeth. He incised. A greenish fluid escaped. The wisdom tooth was felt in its place, but there was also felt an endocystic growth at the upper part of the cyst, which rendered the removal of the diseased portion necessary. (4.) A HYDROCELE SAC, which had been thrice tapped and injected, but had not diminished in size. He had therefore performed an operation for its removal, including the testicle with a large portion of the scrotal coverings. The sac showed that it had been undergoing partial calcification, and the effects of inflammatory action were to be seen here and there over its surface. Healing went on rapidly after its removal. (5.) A SPECIMEN OF FIMBRIATED SYNOVIAL MEMBRANE, removed from the knee-joint of a young lady. Tapping and pressure with the use of oleate of mercury had been tried without much effect. More recently the joint had become the seat of attacks of severe pain. An incision was made into the joint, laterally, on each side of the patella, the diseased synovial membrane laid hold of, and snipped off with a pair of curved, sharp-pointed scissors. Two drainage-tubes were inserted and antiseptic dressings applied. At the end of a week the parts were healed, an anterior splint adjusted to the limb, and the patient allowed to go to the country. She is now able absolutely to place the limb in a straight position, which before she was quite unable to do. It might be within the recollection of the Society that he showed over a year ago the results of a case where he had operated for a similar condition. He saw the patient getting into a railway carriage the other day in Fifeshire, and noticed that he moved about nimbly without the least appearance of lameness. He believed that this mode of treatment was quite original and novel, the opening of the knee-joint for the removal of loose cartilage being, of course, of a different nature altogether.

III. *Mr Joseph Bell* showed a SPECIMEN which he thought of interest in connexion with recent writings on traumatic malignancy. It was a round-celled sarcoma of an undescended testicle, removed from the person of a young gentleman æt. 23. There was only one testicle in the scrotum, and since he was five years of age the patient had a small lump in the left groin, which he was certain was his testicle. It gave him no trouble till six weeks previously, when in going up-stairs he stumbled, and a meerschaum pipe in his pocket injured the undescended testicle. It rapidly swelled, and was about the size of a goose egg when he consulted Mr Bell. There was no pain. After a consultation Mr Bell resolved to cut down on it and deal with it as might be found necessary. After exposing it, it felt so soft and fluid-like that, by Dr Duncan's advice, he inserted a trocar, but, as he expected, failed to get anything save a few drops of a bloody fluid. It was then removed and the ring stitched with catgut. The tumour, on section, was seen to be very diffluent. It had been examined by Dr Hamilton, who pronounced it a round-celled sarcoma. A rapid recovery has resulted.

IV. *Dr Craig* showed a RENAL CALCULUS passed by an old lady æt. 70. The specimen had a great many little sharp nodules on it, and caused so much pain on passing down, that of half-grain morphia suppositories (one ordered every two hours) she took five before obtaining relief.

V. *Dr Kirk Duncanson* showed (1.) a piece of a QUILL, one centimetre in length and five millimetres in diameter, which he had to remove by forceps from the external auditory meatus of a hotel waiter, deaf in his left ear, and suffering from an attack of formicular abscesses in his right ear. To relieve the deafness arising from the closure of the meatus, the patient had cut a piece of a toothpick to the above size and inserted it to keep the walls of the meatus separate. The piece of quill slipped into the meatus beyond the swellings, and, after many futile as well as painful attempts to remove it, the patient came to the Ear Dispensary, 6 Cambridge Street. Syringing could not well bring it out, so he removed it, using the frontal mirror, a small speculum, on account of the painful swellings of the meatus, and an angular pair of fine alligator forceps, as shown. (2.) A BUTTON removed from the external meatus of a boy who had been brought to have a piece of necrosed bone, also shown, removed from the other ear. On examination the button was seen firmly impacted in the meatus. It could not be removed by syringing, but was removed by another classed form of the delicate angular alligator forceps, also shown. The button had caused ulceration and perforation of the membrane.

VI. *Mr Joseph Bell* read his paper on a CASE OF INTESTINAL OBSTRUCTION TREATED BY OPENING THE ABDOMEN, which appears at page 53 of this Journal.

The President said the case was not one of every-day occurrence. He could not help thinking that, though unsuccessful, it had been carefully and well treated, and the fatal issue could in no way be blamed upon the surgeon.

Dr Watson thought the Society was much obliged to Mr Bell for bringing this case before them. In connexion with these cases a good deal more interesting and valuable information might be got if surgeons remembered that it was not successful cases alone that should be published. The misfortune was that in reporting they were all too apt to consider the success, and not the lessons that were to be learned from the history and progress of a case, whether it was successful or not. If such cases were more frequently recorded, a foundation might be formed on which we might construct materials that would enable us to come to a more definite diagnosis of the various causes of obstruction than we could pretend to do now. He thought there was little doubt that had an operation been performed in this case before inflammatory action had set in, the success would have been greater.

Dr Duncan did not know that he had any special confession to make in regard to what Dr Watson had said about not reporting cases. He had operated, he thought, in all five times for ileus. Once the operation was successful, on the other occasions it was not. The cases that seemed to him of most interest were those in which his diagnosis was utterly wrong. One was a patient of Dr Bruce's who had been running about at school up to a day or two before the symptoms of severe obstruction appeared. He thought it was a case of internal hernia with a greater amount of tympanites than usual. The abdomen was opened, and presented an appearance quite appalling. It was all one mass of lymph, the disease being tubercular peritonitis with a fresh acute peritonitis. A loop of bowel was found strangulated or caught by a knot. It was relaxed, and wind rushed down, but the patient died. Another case was equally striking. It occurred in the practice of Dr Balfour of Portobello, who asked Dr Duncan to see it. The patient was a woman who had suffered from an acute obstruction a year before, which had been relieved by opium and belladonna. A second attack came on. He cut down on it, but instead of finding the internal hernia he expected, he found a small and hard sarcoma of the ascending colon. The obstruction occurred there. He cut away a portion of the bowel and made an artificial anus in front, but the patient died two or three days after. These were cases in which, on looking back on them, he did not think that even now he could diagnose from internal hernia.

Dr Affleck had much pleasure in hearing Mr Bell's paper, and confirming what he said. He did not know till he came to the Society that it was this particular case that Mr Bell meant to bring before them. He recollected it well. It was one of great anxiety. Their great difficulty was as to the diagnosis—the coming to a conclusion as to the exact nature of the lesion. In all cases of obstruction he thought that, unless the evidence was in favour of hernia or intussusception, the medicinal remedies should be tried first. This was done in the present case. Galvanism and rubbing of the abdomen were among the remedies. The difficulty in all these cases was the diagnosis, and he thought the subject was one deserving of more discussion.

Mr Bell said that what he wished to bring out was that the lesson he learned from this case was the necessity of not trusting too much to the constitutional symptoms, and of operating early. The symptoms were very mild. He was then against operating too soon; but if he got a similar case now, even though the symptoms were much milder, he would operate at once.

VII. *Dr Duncan* read his paper ON THE TREATMENT OF FRESH WOUNDS, which appears at page 38 of this Journal.

Dr Watson said the observations which had fallen from Dr Duncan were of extreme interest, both in themselves generally and to himself personally, because they corroborated the experience he had in dressings which were almost analogous to those from which Dr Duncan derived so much benefit. Three and a half years ago he had testified to the Society that the results he had obtained from the use of Lister's dressings were unsatisfactory, on account of what Dr Duncan had pointed out to be the inevitable effect of the gauze covered by pink mackintosh, that the perspiration was retained and was productive of evil. On this account he had abandoned that dressing, and had adopted a system of dry dressing similar to what they were familiar with in the practice of the late Mr Syme, but modified in accordance with the theories held at present on the application of antiseptics. In order to assimilate these dry dressings to the methods now in vogue he used boracic lint, dipping its edges in carbolic oil, a preparation which, by evaporation, lost its irritating properties. Where drainage was required he arranged fillets of boracic lint in such a way as to form a cavity, into which discharge was allowed to escape. Over this a bandage was applied, and over that again a quantity of salicylic wool of such a thickness as to prevent any discharge coming to the surface. In hardly any case of a major operation had he ever found it necessary to take down the dressings before, and he hardly ever found a case in which it was necessary to keep on the dressings longer than, three weeks. At the end of that time the parts were usually found to be absolutely healed. In amputations and excisions of the breast the results had been almost uniform. He regarded this mode of dressing as infinitely superior to the use of gauze and waterproof. With reference to the employment of sutures, he did not consider it a matter of much moment to use those which would undergo solution in a certain period. As a rule, the taking out of stitches was not productive of much inconvenience to the patient. As to drainage-tubes, he thought, if they were necessary, that those of indiarubber were best. They were better than decalcified bone or wire tubes, or a skein of worsted wrung out of carbolic acid solution. This last had not so much effect on the drainage of pus as of serous fluid, and if dressings were not changed early it was apt to become impenetrated by the granulation tissue. He had no hesitation in saying that drainage-tubes were of great value; and if the dressing was changed in a week from the day of operation, they could be productive of no harm. They relieved one to a certain degree of any anxiety as to what was going on in the wound while it could not be seen. The temperature alone was not always a safe guide to this assurance. With reference to the time when sutures should be removed, he thought Dr Duncan's statements were correct when the wounds were covered, but for uncovered wounds the time was too long, as, for example, in hare-lip, where he thought the wires should be removed in two days. In cleft palate the same held true. He had operated on upwards of two hundred cleft palates, and always adopted this plan. He was sure that the Society was deeply obliged to Dr Duncan for his paper, and he was delighted to find it agreeing with his own views on dressings, which might possibly be entitled to some claim to originality, as he recollected some years ago being told by a distinguished surgeon in this Society that they were not in accordance with Listerian antiseptics. He had fondly imagined that every method of wound treatment, when successful in obtaining healing without suppuration and without putrefaction, were claimed as illustrative of their effects.

Mr Joseph Bell had the greatest pleasure in rising to express his almost complete concurrence with Drs Duncan and Watson in what they said. They were all getting rid of the gauze, Dr Duncan perhaps more rapidly than himself, and taking to dry dressings in the shape of salicylic and carbolic wools. The only objection he had to salicylic wool was that it caused so much sneezing while he used it, and he wondered if the experience of Drs Duncan and Watson was similar (Hear, hear, from Dr Watson). As for drainage, he felt it to be as important as antiseptics. He could not go quite so far as Dr Duncan in getting rid of the tubes. He found them specially useful in cases of major amputations and excisions of the mamma. He would be glad to hear from Dr Duncan whether the spray was used during his operations in those cases where he had not employed a drainage-tube. If it was, he would ask how he managed to prevent the irritation being set up by the carbolic, which resulted in such a profuse serous discharge during the first twenty-four hours, and which he thought was due to the carbolic spray; at any rate it did not occur in his cases where the spray was not used. He considered that a great amount of honour was due to Dr Duncan for the manner in which he persisted in bringing the value of this mode of dry dressing before surgeons. He might, however, say that in a few of his own cases the gauze and pink mackintosh seemed to have been borne well by the patients, even when worn for a very long time. In one instance a police sergeant had been sent to him from Airdrie to have Syme's amputation at the ankle performed. There was suppuration in the joint, but the man was very anxious to have his foot saved. It was therefore incised under antiseptic precautions. After a few weeks the patient went out, to come back at intervals and have the foot dressed. At first he came back every fortnight. This was soon extended to once a month. The last dressing he had remained on for six months, and when taken off the wound was found healed and the joint mobile.

Dr Kirk Duncanson asked if the surgeons who had spoken had found any benefit from the salicylic wool as an absorbent. He used it as such to clean the ears of patients with otorrhœa, in order to the application of the dry treatment, and he found it much better for that purpose than Lawton's absorbent cotton.

Dr Cadell said the discussion was very refreshing. It would have been rank heresy to have uttered a word against the gauze a few years ago; but now they were as much against it as before they were in favour of it. He had always felt that the gauze and mackintosh prevented healing by the first intention. He expressed his gratification on hearing the change that night.

Dr Cotterill might be allowed to say that the improvements such as Drs Duncan and Watson had referred to could scarcely be said to controvert what Lister had taught us. He thought they were improvements, and Lister himself would regard them as such.

Dr Duncan said he thought the dry method, which was founded on antiseptic principles, would be preferred by all after experience of it. He preferred his own dressings to those of Dr Watson. The serous discharge referred to by Mr Bell ceased entirely within twenty-four hours. He thought Mr Bell would find that if he applied compression firmly enough the amount of this discharge would be greatly diminished. The wound might be redressed at the end of twenty-four hours, if necessary, on that account, and not looked at again till it was healed. He thought this was better than to leave it a week with a drainage-tube in, and then take down the dressing for the purpose of removing the drainage-tube and sutures.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING VIII.

Wednesday, 22nd March 1882.—Professor SIMPSON, *President, in the Chair.*

I. *The President* showed a PREPARATION OF A UTERUS WITH MULTIPLE FIBROID TUMOURS, taken from a patient who had died during an attack of acute mania. She had been under the ergotin treatment for some years, and its beneficial effects had been seen in diminution of the enlarged uterus. The preparation showed how the muscular fibre could compress the tumours and diminish their blood-supply. After the menopause she had to be put into an asylum, where she died of erysipelas from some injuries in her arm self-inflicted during a maniacal paroxysm. There were plates of bone found in the falx cerebri.

II. *Dr Hart* read his paper on SOME POINTS IN THE PHYSICS OF THE RECTUM AND BLADDER, which will appear in a future number of this Journal.

The President said that this paper threw light on the structure of the pelvic organs and their relation to the pelvic floor, which Dr Hart has made his special study. Dr Hart had shown that the apparently weak points in the pelvic floor held a close relation to the functions of the organs. The difference in the directions of the three pelvic outlets was worthy of note, those of the urethra and vagina being forwards, while that of the rectum is backwards, so that deficiency of the perinæum favours pouching of the anterior wall of the rectum. The sphincter tertius might aid in closing the rectum. The experiment with the test-tubes demonstrated how the sucking in of a catheter was due to the atmospheric pressure. He had seen this occur in a patient of the late Dr Ziegler's; the catheter broke off half an inch from the point of the penis, and was sucked back at once into the bladder.

Dr T. D. Wilson thought that the experiment with the test-tubes did not explain the retraction of the catheter, because the test-tube had rigid walls.

Dr Barbour showed that the experiment was analogous, inasmuch as the retraction was due in both cases to atmospheric pressure. In the case of the test-tubes, the vacuum was created through abstraction of the fluid by capillary action. In the case of the bladder, it must be created by elastic recoil either of the walls of the bladder or of the abdominal walls. He thought Dr Hart had given an admirable explanation of the mechanism employed in defæcation.

Dr Bruce had occasionally observed that there was difficulty in withdrawing the catheter from the empty bladder, which was cleared up by Dr Hart's explanation.

III. *The President* read the REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL for quarter ending January 1882, which appeared at page 994, vol. xxvii., of this Journal.

Dr Wilson congratulated Professor Simpson on the absence of maternal mortality, with the exception of the case which proved fatal through pneumonia, during his quarter of service.

Dr Thatcher asked why the forceps were not applied sooner in the cases where it was said the parts had become œdematous.

Dr Hart drew attention to the case of a syphilitic mother having a healthy child. He had seen two similar cases. In one the mother had had syphilis four years previously, and then gave birth to a healthy child. In another case the mother had marked hereditary syphilis, but the child was not syphilitic.

Dr Craig thought that these cases might be analogous to cases of phthisis, in which the disease apparently passed over one generation, but was really latent.

Dr Wilson remarked that the analogy between syphilis and phthisis did not hold, as the latter did not pass over a generation.

Mr W. B. Alexander, surgeon, was admitted as a Fellow of the Society.

THE BOSTON
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Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Sierra Salvia, a Substitute for Quinine.—Sierra salvia is not a "new remedy," but the resultant of an investigation of one known in this region for a quarter of a century. I refer to a species of the composite family of the division "*Artemisia*," known among the pioneers as "mountain sage," or the Spanish translation of the same, "sierra salvia." This plant is found upon both slopes of the Rocky Mountains and in many of the parks among the foot-hills. It has many varieties, but the one adapted to therapeutic purposes is quite limited in its area, and confined mostly to the parks of a higher elevation. The early trappers and fur traders, who preceded Fremont's expeditions nearly thirty years ago, were accustomed to rely exclusively upon a tea made from this herb for cases of pneumonic and mountain fever, and about twelve years ago a compound was made and placed upon the market as a specific for fever and ague, of which this plant is the basis. It is still sold as one of the "patent" medicines, and I wish now to present the merits of this plant, so that the profession may use it logically and legitimately. As stated above, it has been recognised for years and applied with unfailing success by those living near its local habitat, and many travellers have taken the herb away with them for domestic needs as they arise. I think I am the first to systematically investigate its action, and with results which convince me that it is destined to take a place beside quinine, because in some cases it is better adapted and much more economical, especially since a condensed form, the fluid extract, has been successfully prepared and placed for general distribution. Heretofore the difficulty has been that the plant can be gathered only in a certain brief interval, and will not retain its properties sufficiently to encourage long transportation and storage. I began my investigations about two years ago, after using it in my own case during an attack of "mountain fever," subsequent to my first trip to Colorado. I tried quinine and other remedies usually advised with like symptoms, namely, high temperature, dry skin, cephalalgia, as also pain extending along the spinal cord, constipation, and nausea. One chill usually announced the onset, and soon I began treatment, as above stated, with quinine and cathartics, and after a siege of nearly three weeks I yielded to the suggestion of an old practitioner and tried the salvia tea. It was prepared, as is the local custom, by pouring boiling water over the leaves and blossoms of the plant, and setting it aside to cool. It is taken, whenever you wish a rapid action to relieve the suppressed excretions from the skin and kidneys, as hot as can be tolerated and as freely as one chooses. I took one gobletful and in thirty minutes another, when a profuse perspiration ensued. In three days I was out of my room and convalescent. I have since that date practised here, and one winter at my former home, a city of southern New York State. I have a list of cases of my own observation and of my colleagues, whose opinions I prefer to defer to, in the east, the central, and extreme west, which I now believe thorough and conclusive. I do not think it is so widely adapted as is the use of quinine, but in many types of cases it is much better. Those in which we have more particularly tested it, in our investigations of the past two years, are disorders due to malarial causes and any form of disease which occasions a high temperature. The intermittent, the remittent, the congestive forms of fever, yield to it much more readily than to quinine, and with infinitely less disturbance to the system. In my former cases I used the tea from the leaf and blossom (about ½ ounce to a pint of boiling water), and advised drinking one full goblet an hour before the time of expected chill, and again in a half hour, provided the stage of perspiration did not exhibit itself meanwhile, and in no case excepting one did I fail to intercept the chill stage. I also combined the tea with the acid of lemon, which moderates the taste and is also indicated therapeutically. After I learn that the tendency to chill is overcome, I have either suspended entirely all medicine, or, if a tonic be required, have been accustomed to use a wineglassful of the tea cold, before meals, to stimulate the digestive tract, or combine it with a tonic dose of quinine, although persons who have lived in a malarial region, and, like myself, have been accustomed to the use of quinine for years, so much prefer the effect of the salvia that the use of quinine with them is entirely suspended. I have been accustomed to order one teaspoonful of the fluid extract to a glass of strong, hot lemonade, one hour before the expected chill, and repeat it in thirty minutes if stage of perspiration is not exhibited meanwhile, and otherwise use the precautions customary between the interval of the chill stages. In cases of rheumatism, of scarlatina, of diphtheria, of pleuritis, of pneumonitis, at the early stage of the acute onset, when the hot dry skin, the headache, the suppressed urine, the high temperature, all beg for immediate relief, I am accustomed to use it hot, as above, and repeat each half hour till perspiration and urination are certainly established, and the promptness together with certainty which follows renders it invaluable in the higher altitudes, where relief must not be delayed in such cases. It is especially adapted, however, to the rheumatism, sciatica, neuralgia, and general malaise of a malarial region, as I believe, and will do more to resolve us from the exorbitant price of quinine than the removal of revenue duties or transplanting of the tree from Peru to the Indies and other places indicated. The advantages of sierra salvia are that the preparations which take their name from the "Countess del Cinchon" are certainly more objectionable in other ways than the oppressive cost. 1st, The salvia is much more palatable, and, when diluted with lemon acid, as above, is not refused by children even. 2nd, It acts more promptly, since we require from three to five hours to secure the culminating effect of quinine. 3rd, It is less inclined to disturb the patient's system, for it produces no ringing of the ears, no deafness, no temporary delirium (and I have taken to extent of 10 doses in one evening to test the effects, and only found the perspiration and excretions of the kidney increased). 4th, There is not the depression which usually follows a protracted siege with cinchona extracts, and a tendency to quiet sleep succeeds the active effect of the salvia, instead of wakefulness, which is the law with quinine. 5th, It passes out of the system per the kidney in not more than 10 or 12 hours, whilst it requires from 24 to 48 hours for quinine to become excreted. 6th, Thus far I find no instances in which other remedies are incompatible (by A. Comstock, M.D., Silver Cliff, Col.)—*Therapeutic Gazette*, April 1882.

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

DEAN SWIFT.—The question of the nature of the malady from which this distinguished author suffered for many years, and which ultimately terminated in his insanity, is considered by Dr Bucknill in *Brain*. After citing numerous passages from his letters and Journal, he arrives at the conclusion that from the age of twenty years Swift was beyond doubt the subject of auditory vertigo or Menière's disease, which subsequently gave place to dementia with aphasia. Dr Bucknill considers that the labyrinthine vertigo had an indirect effect in the causation of the insanity, but does not maintain that there was any extension of the local disease to the brain. The symptoms of this now well-known form of vertigo appear to have been well marked in the Dean's case; and Swift himself has aptly described his condition as *vertiginosus, inops, surdus, male gratus amicis.* The article is of interest as showing how, with the advance of pathology, new light is thrown on the disorders of our illustrious ancestors.

RESECTION OF THE SPINAL ACCESSORY NERVE.—At a recent meeting of the Paris Academy of Medicine, M. Tillaux gave the history of a patient whom he treated for torticollis accompanied with violent pain in the left region of the occipito-vertebral articulation. She had previously been treated by induction currents and magnets, also by metallo-therapy, continuous currents, bromide and iodide of potassium, but without success. M. Tillaux divided the sterno-mastoid muscle, and for some time after the operation the patient appeared to be cured; but eventually the pains returned, and her head was again drawn to the right side. M. Tillaux kept the patient in his wards for eighteen months, and ultimately decided to resect the spinal accessory nerve. The pain was much less violent after this operation, and the head was only slightly drawn to the right side. This improvement still continued. Claude Bernard considered the spinal accessory nerve to play an important part in the function of the voice. In the patient this function was not disordered.—*Brit. Med. Jour.*, 29th April 1882.

A CASE OF VICARIOUS MENSTRUATION.—The patient, 18 years of age, was admitted, 22nd August 1881, to St Mary's Hospital, under the care of Mr Field. She had had a purulent discharge from the right ear since she was six years of age, which followed a blow behind the ear. At twelve years old she became subject to pains in the back and sick headaches; two years later she was awaked at night by epistaxis, which returned again the following day, and again three days later. About a month after this, hæmorrhage occurred from the right ear, which lasted an hour and was profuse; this was accompanied by a buzzing in the ear and ticking in the head, and since that she has regularly every three weeks lost blood from the same ear. The hæmorrhage generally lasts about ten minutes, as she checks it with applications of cold water; only once has she menstruated from the vagina, and that was in 1879, when she consulted a physician, who brought on the flow by a warm foot-bath and mustard, but bleeding from the ear was likewise present. There was a large perforation in the right membrana tympani; breasts small; no os uteri could be detected by the finger, and there was a copious yellow discharge from the vagina.—*Medical Press and Circular*, London, 8th Feb. 1882.

SOME CASES OF REMOVAL OF OSSEOUS TUMOURS FROM THE AUDITORY CANAL.—At the Harveian Society of London, Mr Field said that in the removal of osseous tumours he was in the habit of drilling through the growth with the American dental engine, thus making a permanent opening where the exostosis was of ivory-like hardness; but in other cases of pedunculated osseous tumours made up of soft bone he usually removed them with stump forceps such as are used by dentists for the upper jaw. In all cases the patients regained hearing satisfactorily. In five of his cases the disease seemed to have been brought about by sea-bathing, and commenced as a chronic inflammation of the walls of the external meatus, and he believes this is much more frequently the cause than gout, rheumatism, and syphilis.—*Lancet*, 21st Jan. 1882; *American Journal of Otology*, vol. iv. No. 2.

THE ACTION OF QUININE AND SALICYLIC ACID ON THE EAR ("Ueber die Einwirkung von Chinin-und Salicylsäure auf das Gehörorgan," Kirchner, *Berliner Klinische Wochenschrift*, No. 49, 1881).—Kirchner has studied in the Pharmacological Institute of Würzburg the action of these two drugs upon the ear, with reference to settling the still open question whether their well-known specific action (tinnitus aurium) is due to congestion of the labyrinth. Clinical observation has long since proven that they directly produce subjective noises, usually described as ringing, and also a certain and often very marked degree of deafness. Both of these symptoms usually pass away when the administration of the drugs is stopped; but occasionally, when the drugs have been given in very large doses or for a long time, both symptoms continue and become a life-long and serious affliction. Notwithstanding the fact that these clinical symptoms have been seen so often, but few anatomical observations on their causes have been made. For his experiments Kirchner used rabbits, cats, dogs, guineapigs, and mice; for his clinical observations he had a garrison hospital situated in a malarial district. His conclusions are that quinine and salicylic acid produce hyperæmia of the tympanum, which may go on even to hæmorrhage, and that the whole labyrinth is likewise involved in this hyperæmia, which is often so intense that if it continued any length of time it must necessarily injure the ultimate nerve fibres. The cause of this hyperæmia is referred to vaso-motor disturbances, which may produce in severe cases a paralysis of the vessels and an exudation in the various parts of the ear,—the same conclusion which had been reached previously by Weber-Liel, Roosa, and others.

THE ACTION OF QUININE AND SALICYLIC ACID ON THE HUMAN EAR ("Zur Frage der Einwirkungsweise von Chinin-und Salicylsäure Präparaten auf das menschliche Gehörorgan," Weber-Liel, *Monatschrift für Ohrenheilkunde*, No. 1, 1882).—In conjunction with Dr Guder, experiments were instituted upon twelve young and healthy medical men, with the following results, one gramme (about 15 to 16 grains) of quinia muriatica being given:—1. A gradual fall in the temperature of the external meatus in the course of two and a half hours, averaging ·56° C., and corresponding with the fall in temperature of the whole body. 2. No hyperæmia of the meatus or drum-membrane, and no injection along the manubrium, was noticed within that time or later. On the contrary, in five of the cases the slight injection which previously existed disappeared. 3. Subjective noises, as roaring, buzzing, or ringing, were always produced in from one to one and a half hours, and disappeared gradually within twelve hours. 4. After from two to three hours a decided diminution of the hearing showed itself, to disappear gradually as the subjective noises ceased. 5. In eight of the cases dizziness, usually slight, but in some severe enough to cause a staggering gait, came on with the subjective noises. The greatest loss of hearing appeared at the time when the temperature was the lowest. Similar experiments were used, in conjunction with Dr Sachs, to determine the effect of salicylic acid, the conclusions being as follows from taking four and a half to five grammes (60 to 68 grains) of the salicylate of soda in two doses at an interval of fifteen minutes:—1. A diminution in temperature of the meatus averaging ·35° C. within two or three hours. 2. No hyperæmia of meatus or injection along the manubrium; and where any such already existed, no change whatever was noticed. 3. Roaring, singing, and occasionally ringing were felt in all cases in from two and a half to four hours, and lasted longer than similar noises produced by quinine. 4. The loss of hearing was very marked, and continued in several cases for some days; in several cases where the ears were diseased the loss of hearing continued much longer, in one case, it is said, for six months. 5. Decided dizziness was noticed in seven of the twelve cases, beginning somewhat later than the subjective noises. Comparing the second series (salicylic acid) with the first series (quinine), it was found that in the second the fall in temperature was less, but the diminution in the hearing was greater and continued longer.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

On Prurigo.—Hans Hebra, in course of some remarks on a case of prurigo, made some interesting observations. We know very little of the disease itself. We see only the artificial eczema, the effect of the disease. Consequently the primary and secondary lesions present variety, but the greatest number of nodules, papules, vesicles, pustules, and crusts are situated upon the *extensor* surfaces of the extremities. On the inner surface of the elbow-joint, over the popliteal space, there is no efflorescence and the skin is apparently healthy. There is diminution of subcutaneous fat. The lymphatic glands in the groin are indurated. The disease occurs chiefly in young people of bad constitutions, and in the old age of fat people who have become thin. In the latter case it constitutes pruritus senilis, the sole distinction between pruritus senilis and prurigo being that the former affects the entire surface of the body uniformly, and is not so sharply confined to the extremities. In the Austrian army, prurigo exempts the individual in whom it occurs from all service. Hebra relates an anecdote of a military surgeon who passed a man for service, cured temporarily of his prurigo by hospital treatment. When the soldier arrived in Bosnia he was exposed to the usual hardships of a campaign. At night the noise of scratching was insufferable to the other soldiers. While on a battle-field, the poor fellow forgot to shoot, and fell to scratching. He was sent back to a hospital, and after a short interval he became well enough to return to his regiment. Soon, however, the prurigo recurred, and he was sent back to Vienna for medical inspection, and was there exempted from duty by reason of the nature of his affection. The army surgeon, however, was held responsible for all the expense incurred by the State in transporting, feeding, and clothing the man during his connexion with the army. This amounted to three to four hundred florins, which must have made a serious inroad into the surgeon's pay. Treatment can alleviate the disease; it cannot cure it. A sulphur bath twice a week would keep the patient comfortable.—*Philadelphia Medical Times,* March 11, 1882.

BUCCAL ULCERATIONS OF CONSTITUTIONAL ORIGIN.—Wigglesworth and Cushing direct attention to the diagnosis and treatment of these. The appearance of these ulcers is usually quite characteristic; and even when it may not be possible to say certainly that the case is one of syphilis, yet in the matter of treatment the doubt is of little consequence. In cases of lupus the local treatment is identical with that adapted to ulcerations due to syphilis. Even when pulmonary symptoms cannot be detected in cases of tubercular ulceration of the fauces or palate, the patient is sure eventually to die of tuberculosis more or less general; and treatment is practically useless. Epithelioma almost always begins in the lips or upon the tongue, or in the larynx, and in the last two situations may sometimes lead to difficulty. With regard to the treatment of syphilitic ulcers, it may be said that stimulant are far better than caustic applications. Iodine is used as spray, and in this way prodigious amounts of unhealthy secretion are sometimes brought away from the vault of the pharynx and the posterior nares, to the great relief of the patient, while the fœtor of the breath is at the same time abolished. The customary strength of the solution used for atomization is one-ninth that of tincture of iodine, or tinct. iod. 5 parts, glycerine 10 parts, aq. 30 parts. The most convenient instrument to use is that known as Fulgraffe's, which is made of hard rubber with nozzles of various shapes—one to send a stream of spray up behind the soft palate, one for a horizontal stream, and one for use in the larynx. Three or four applications of twenty seconds each will be sufficient to thoroughly cleanse and stimulate any ordinary ulcerations. After the use of the spray, iodoform should be applied to the ulcer with a camel's-hair pencil, or blown on to it by an ordinary insufflator. A little powdered gum arabic mixed with the iodoform makes it adhere better. Iodoform can also be conveniently deposited on the nasal mucous membrane by letting the patient inhale a saturated solution of the drug in ether. Some cases require the use of the nasal douche with disinfectants. A convenient formula is, one teaspoonful of chlorate of potash, with one-third as much carbonate of soda, and 15 drops of a 5 per cent. solution of permanganate of potass, all in a quart of water at 77° Fahr., used with a fountain syringe. Of course, constitutional treatment is of vital importance; but these deep ulcerations occur late in the course of the disease, from two to twenty or more years after the primary infection, usually in cachectic individuals. Mercury, therefore, plays a less important part in the treatment than iodine and its compounds. Cod-liver oil, ferric iodide, potassic iodide, iodine spray, iodoform, these are the great remedies. Exercise, fresh air, and cleanliness, with good food, must not be forgotten; and if all these means be suitably employed, the most frightful syphilitic ulcerations will usually heal with surprising rapidity. In lupus, cauterization may be used more freely, especially where any peripheral deposits are detected. Mercury is injurious; cod-liver oil is of the greatest efficacy; and the local iodine treatment, with ferric iodide internally, gives excellent results. A number of illustrative and highly successful cases are given in full.—*Archives of Dermatology*, January 1882.

ECZEMA OF THE EXTERNAL AUDITORY CANAL.—This may sometimes persist for a long time without being recognised, there being only moderate redness, together with considerable scaling and some itching, both consequent upon the infiltration. For this the ear will be syringed again and again, only to have the canal fill up as before with rather greasy scales. This condition yields, as a rule, completely to tannin ointment, a drachm to the ounce, put thoroughly and deeply in the meatus by means of a camel-hair brush. As in the treatment of eczema elsewhere too much washing does harm, so in eczema of the external auditory canal too frequent syringing is harmful. Every few days, if there is too much accumulation of scales and ointment, it may be syringed out with a little borax or soda and water, and the ointment immediately replaced. If the condition resists this treatment, dilute citrine ointment may be used, or the canal may be painted with a weak solution of nitrate of silver in sweet spirits of nitre. In the main, however, reliance may be placed upon the faithful use of the tannin ointment.—*Eczema and its Managemeat*, by L. D. Bulkley, M.D.: Churchill: 1881.

A New Parasitic Skin Disease.—Dr Nielly, Professor of Exotic Pathology at the Naval Medical School at Brest, recently exhibited at the Academy of Medicine a lad, aged fourteen, who had just entered the service. An eruption—papular, vesiculo-pustular, discrete, or confluent—was present on the left upper extremity, in some places on the body, and thickly on the lower extremities. The sero-pus from the eruption showed under the microscope numbers of nematoids not unlike filariæ or anguillulæ. These worms, colourless, transparent, and measuring on an average $\frac{333}{1000}$ of a millimetre in length by $\frac{13}{1000}$ in width, were in constant flexious movement, generally slow, but occasionally active, but had nothing in common with the *Filaria medinensis* or *hominis sanguinis.* Dr Nielly believes this disease, undoubtedly parasitic, to be identical with the craw-craw described in 1875 by Surgeon O'Neill, R.N., as prevalent among the black population of the Gold Coast; but whether it be the same or not, he is not aware of its having been hitherto recognised by any observer in Europe. As the boy had never left the place of his birth, it seems highly desirable that further researches should be carried out in that part of Brittany.—*Medical Times and Gazette,* April 29, 1882.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By J. Milne Chapman, M.B., M.R.C.S.

Are Uterine Displacements Curable by any Means (E. C. Gehrung, M.D., *St Louis Courier of Medicine,* March 1882).—This paper was written before that on the same subject by Paul Mundé, though published subsequent to it. The writer's conclusions are:—

1*st.* Acute displacements may be cured by almost any means or methods. Even here permanent cures are not the constant termination.

2*nd.* Subacute cases are occasionally cured by surgical operations, some get well (apparently or really) by themselves if left alone, others are benefited by pessaries as temporary supports, and therapeutical means. The resulting cure is frequently not due to the means employed.

3*rd.* Chronic cases are rarely ever permanently *cured* by any of the known means. Among those cases that can be relieved by operations, some will be permanently cured, by far the greatest number only temporarily. Pessaries seldom effect a lasting cure, but, worn constantly at first and interruptedly at a later period, may render the patient perfectly comfortable for lifetime, and this is almost equal to a cure.

4th. Uncomplicated ante- and retro-versions are the displacements which are most easily removed. Pessaries are the principal means for their removal, sometimes cure. Surgical and other means are usually unnecessary and rarely successful.

5th. Retroflexions, if uncomplicated, are next in the scale for easy replacement. They yield best to pessaries, but, as a rule, will return soon after their removal. If complicated with tissue metamorphosis or otherwise, retroflexions are indeed very troublesome, though they can mostly be overcome by pessaries and manual assistance. On removal of the pessary the displacement rapidly returns. All other means are unreliable.

6th. Anteflexions are still less amenable to curative treatment than the aforementioned displacements. Though cures are claimed in consequence of bilateral and posterior sections, by tents and by intrauterine stem pessaries, the flexion is not cured, only the stenosis is lessened. Vaginal pessaries offer the best success with the least risk. Highly gratifying results may mostly be obtained by their judicious use. Where weakness from atrophy or anæmia or subinvolution is the cause of the flexion, electricity, rest, posture, massage, local and general medication, are the means to be relied upon. Pregnancy, *if possible*, often diminishes the subjective morbid symptoms, rarely ever cures the disease.

7th. Latero-versions, true and false, are troublesome displacements. They can, however, as a rule, be conquered by appropriate pessaries. All other means are powerless.

8th. True latero-flexions are happily very rare, and almost incurable. False (or pseudo) latero-flexions, *i.e.*, lateral rotation of ante- and retro-flexions, are amenable to the same treatment as the primitive displacement upon which they depend, but with somewhat modified ante- and retro-*version* pessaries. So called *flexion* pessaries are a dream of the past.

9th. Retroverted anteflexion (probably a congenital defect) cannot be replaced by any means except pessaries. This is, if possible, a more troublesome displacement than even pseudo latero-flexion. If the relief of the accompanying symptoms by a partial restoration to normal shape and position could be called a cure, this displacement might be considered as generally curable by pessaries, while all other means appear to be useless.

10th. Prolapse of the first degree, when uncomplicated by diseases or tumours, and dependent, as it is, on relaxation of the supports *en masse*, may be relieved or cured by rest, posture, general and local medication, electricity, massage, etc. The simultaneous use of an appropriate pessary should never be omitted.

11th. Procidentia or prolapse in second and third degree may be temporarily (rarely permanently) cured by operations, or permanently relieved (probably never completely cured) by pessaries.

12th. Ovarian displacements can generally be reduced and retained by well-constructed pessaries, with complete relief of symptoms, provided there is no structural disease in the displaced ovary. If such disease is present the relief will be in inverse ratio to the disease. Surgery alone promises a cure (?) by extirpation of the diseased ovary.

13*th*. Rectocele and vesicocele must be met surgically if complicated by laceration of the perineum; if not so complicated, pessaries offer the best result.

CHARACTERISTIC LABOUR SCENES AMONG THE YELLOW, BLACK, AND RED RACES (by Geo. Englemann, M.D., *Ibid.*)—This is a further contribution to the ethnological study of labour, and, according to an editor's footnote, we find that the author intends soon publishing all his researches in book form under the title *Labour in different Nations.* We are sure that the appearance of this work will be looked forward to with great interest.

DRAINAGE IN THE REMOVAL OF SUB-MUCOUS FIBROIDS (W. H. Baker, M.D., Harvard University, *Archives of Medicine*, Feb. 1882).—The author relates seven cases, in all of which he employed a drainage-tube, and strongly urges its use after the removal of submucous fibroids wholly within the uterine cavity, to be adjusted at the time of the operation, sewed to the cervix, and left in peace till all discharge from the uterus has ceased. The form of tube recommended resembles a Fergusson's speculum in miniature, long enough to pass within the inner os, and is perforated on the sides.

ABDOMINAL SECTION FOR THE REMOVAL OF FIBROIDS AND OF THE BODY OF THE UTERUS (Olshausen, *Deutsche Zeitsch. f. Chirurgie*, Dec. 1881).—This paper is devoted to advocating the intraperitoneal method of dealing with the stump after such operations. According to circumstances, the writer recommends that it either be ligatured or that a wedge-shape portion be dug out of it and the edges sewn together. Two successful cases are related, where, after amputation of fibroids, the broad pedicles were surrounded by stout elastic ligatures, which were stitched to the tissues to retain them in position, and then the whole returned into the abdominal cavity. The writer believes that the intraperitoneal method of dealing with such cases will come to be as extensively employed as it now is in ovariotomy.

An article on a similar subject, but treating it from the standpoint of experiments on animals, and describing an instrument to secure greater certainty in tying knots on the elastic ligature, will be found in the *Berlin. Klin. Wochensch.*, 1882, No. 12, by Kasprzik, Freiburg.

CASES.

Sloughing sarcoma of the uterus; suppurative salpingitis; extensive thrombosis. Wm. J. Lusk, M.D.—*New York Med. Journ. and Obstet. Review*, April 1882.

A case of puerperal chorea. P. F. Mundé.—*Am. Journ. of Obstet.*, Jan. 1882.

Miscarriage followed by labour at full term. S. B. Hawkins.—*Trans. of the Med. Assoc. of Georgia*, 1881.

A case of criminal abortion, resulting in death from air-embolism. W. W. Gannett.—*Boston Med. and Surg. Journal*, Jan. 12, 1882.

Case of laparatomy through false diagnosis (pregnancy mistaken for ovarian tumour; death of both mother and child; judicial charge against operator). Dr Reimann, Kiew.—*Centbl. f. Gynäk.*, No. 15, 1882.

Case of annular stenosis of the vagina as an obstruction to labour in a multipara. Wolczynski.—*Ibid.*, No. 16.

Case of complete prolapse of the vagina during pregnancy and delivery. Krauss.—*Inaug. Diss.*, Greifswald, 1880.

Two Cases of pregnancy and delivery complicated with ovarian tumours. Fischel.—*Prag. Med. Wochensch.*, 1882, Nos. 6 and 7.

Statistics of 39,000 deliveries. Ditzel.—*Copenhagen*, 1882.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

ON THE USE OF IODOFORM IN THE BUCCAL CAVITY.—The effects of iodoform in tubercular joint affections, as well as the certain and reactionless course which non-sutured wounds of the surface or of cavities run under the application of this drug, suggested the advisability of testing its value in wounds of the natural openings of the human body; and the more so on account of the difficulty which has hitherto been experienced in carrying out antiseptic treatment in those regions. Numerous operations in the buccal cavity, lately performed in Professor Billroth's clinic, have afforded us a certain amount of experience in this direction. From April to October 1881 eighteen lingual carcinomata were extirpated. In some of the cases a third or a half of the organ, but in the majority the whole tongue, was amputated. Simultaneously more or less of the floor of the mouth had to be removed, the excavation sometimes extending to the hyoid bone and digastric tendon, and including the submaxillary and adjacent cancerous lymphatic glands. Besides, in several instances the inferior maxilla was partially resected, or portions of the soft palate and pharynx were excised. Ligatures were, as a rule, applied beforehand to the lingual and external maxillary arteries. In all these eighteen cases a cure was the result. There was no reaction in any of the wounds, and in most of the cases there was no rise of temperature observable after the operation. There was an absence of those complications which were formerly observed after extirpation of the tongue. There can be scarcely a doubt but that these favourable results stand in direct relation with the employment of iodoform, for the *technique* of the operation has undergone no alteration. The points to be kept in mind in this method of wound-treatment are the following:—When, after extirpation of the tongue and floor of the mouth, the wound made in ligaturing the arteries before mentioned communicates with that in the buccal cavity, the latter is drained by means of a tube of the thickness of a finger.

If no such intercommunication exists, it is not purposely set up. In all cases the edges of the ligature-incision are brought together with sutures. After the operation, and in size corresponding to the depth and width of the wound, a strip (four-ply) of iodoform gauze, 6–8 inches long and 1½ to 2 inches wide, is introduced into the mouth, and pressed with moderate firmness against the sides of the cavity, which it quite fills up. This small quantity of gauze suffices to keep the wound completely and lastingly aseptic. The first dressing usually remains adherent to the surfaces of the wound for from five to eight days. It does not separate of itself during these first days, and even then need not be changed if the patient is taking fluid nourishment. It must be specially noticed, however, that ordinary gauze does not adhere so certainly as that prepared in the following manner:—60 grammes of colophony are dissolved in 1200 grammes of alcohol, and 50 grammes of glycerine are added to the mixture. In this six metres of purified gauze are soaked, then wrung out, and dusted with 50 grammes of pulverized iodoform. If we compare these recent results with our former experiences after extirpation of the tongue, we must feel convinced that in iodoform we have found an agent for treating wounds of the buccal cavity, the mode of application of which is as simple as its antiseptic qualities are trustworthy.—Wölfler, in *Centralblatt für Chirurgie.*

ISCHÆMIC MUSCULAR PARALYSES AND CONTRACTIONS.—Many years ago I drew attention to the fact that the paralyses and contractions of the limbs which sometimes arise after the too firm application of bandages do not depend, as had till then been generally supposed, on lesions of the nerves, the results of pressure, but on a rapid and extensive destruction of the contractile substance, and the processes of reaction and degeneration which follow thereupon.[1] Since then experience has largely confirmed the correctness of the above statement, and at the same time has afforded opportunities for gaining a closer insight into the character of the processes in question. My present views on the subject may be briefly defined in the following sentences:—1. The paralyses and contractions which develop themselves in the hand and arm especially, and more rarely in the lower extremity, after a bandage has been too firmly applied, are ischæmic in character, and originate in the too long continued deprivation of arterial blood. The venous congestion, sometimes very extensive, which is usually present as a concomitant seems only to accelerate the development of the paralysis. 2. The ultimate bundles of fibres, too long deprived of oxygen, perish. The contractile substance coagulates, breaks into small masses, and is finally reabsorbed (Heidelberg,[2] Kraske[3]). The contraction is therefore to be regarded simply as a rigor mortis, and the paralyzed limbs, when, as is usually the case, the entire *musculature* of a limb or section of a limb is involved, fall into those positions which are characteristic of ordinary cadaveric rigidity. 3. It is a noteworthy feature of these cases that the paralyses and contractions occur simultaneously, or, at any rate, follow each other in rapid sequence; whilst in paralysis of extremities dependent on a neurosis, contraction is invariably gradual and often tardy in its appearance. Months and years may elapse in these latter cases before the appearance of any deformity greater than can be rectified by moderate manipulation. 4. Ischæmic contraction, on the other hand, manifests itself from the first moment of its existence through the enormous resistance which it opposes to the straightening of the limb. The muscles affected, even in quite recent cases, have, as in rigor mortis, completely lost their extensile power, and are completely rigid. 5. The processes of reaction and regeneration by which this degeneration of contractile substance is followed, and which in man always remain very incomplete, render the affected muscles still more unyielding, and increase the contraction still further through cicatricial shrinking (Kraske, *loc. cit.*) 6. Ischæmic paralyses and contractions exactly similar in character to those observed after the too firm application of an Esmarch or ordinary bandage occur also after deligation, rupture, or contusion of large vessels, and perhaps also after a part has been long exposed to the action of excessive cold. It is possible that some of the so-called rheumatic contractions are ischæmic in their nature. That the muscles of animals cannot be completely shut off from the arterial blood stream for six hours without subsequent destruction of a large number of fibres, and that the most acute reactive processes develop in the muscles in question after six hours of such arterial starvation, are facts which Kraske has clearly demonstrated, and which must be well borne in mind in regard to the so-called autotransfusion. The circumstance that, so far as I know, no unfavourable observations have been made during the employment of the treatment in question, although the india-rubber band has been applied for hours at a stretch, does not prove much, for the great majority of patients have, for all that, certainly perished. On the other hand, the ischæmia arising after a too energetic application of bandages is almost never complete. The character of the subsequent lesion, its mildness or otherwise, is dependent on the degree of the ischæmia and the number of fibres affected by it. If the ischæmia is considerable, and alarming symptoms are rapidly developed, the bandage will be removed, although half a day or less may suffice to permanently cripple both hands and fingers. If the constriction be less, then, in spite of repeated complaints of pain, and in spite of œdema of fingers and toes, the bandage is allowed to remain on for weeks, and the result, notwithstanding, is only a moderate loss of muscular fibre and moderate contraction. Such moderate contractions are frequently observed after *fractura radii typica.* Even in these cases the subsequent slight fixation of the fingers in the flexed position only gives way after months of energetic treatment. 8. The prognosis in this condition will depend entirely on the amount of muscular fibre involved. The severe cases where hand and fingers are affected may be looked on as absolutely incurable. The prognosis is better as regards the lower extremity, for here the chief symptom, muscular shortening, can be got rid of by tenotomy. But even the milder cases are, as already stated, only to be remedied by the most energetic and immediate treatment. 9. Remedies other than mechanical are useless. In recent cases of ischæmic contraction we endeavour, in the first place, to stretch the shortened and rigid muscles. This is done under chloroform, and with the exercise, if necessary, of all our force. In cases rather more advanced this is useless; we might fracture bones and rupture tendons before the muscles would give way.—R. Volkmann, in *Centralblatt für Chirurgie.*

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[1] Volkmann, *Krankheiten der Bewegungsorgane.*

[2] Heidelberg, *Zur Path. d. quergestr. Musk.*, Breslau, 1878.

[3] Kraske, *Exper. Untersuch. ü. d. Regen. d. quergest. Musk.*, Halle, 1878.

RUPTURE OF AN UMBILICAL HERNIA, WITH EXTENSIVE PROLAPSE OF INTESTINES.—Late in the evening of 20th August 1865 I was called to a woman at Sechshaus, near Vienna, who was suffering from a ruptured umbilical hernia with intestinal prolapse. The patient, who was about fifty years of age, strong and well nourished, had been the subject of exomphalos for ten years. The tumour was of the size of two fists, and had been supported by a very imperfect ordinary umbilical truss. Two hours before my arrival the patient, who was wearing the truss at the time, had stumbled and fallen face downwards. Whether or not at the same time she had come in contact with some projecting body could not be made out. In the moment of falling the hernial sac and the skin to which it was adherent gave way, and a mass of intestines poured through the gap. The length of gut protruded might be about 10 feet; it was of a reddish colour, and contained but little flatus. There was no prolapse of omentum. On pulling the mass aside, a lacerated wound 4½ inches long was seen running obliquely from the right downwards to the left. Its edges were ragged, but did not bleed. The coverings of the hernia were extremely thin, and had become fused into a single layer not more than $\frac{1}{25}$th of an inch in thickness. The pulse and respiration were normal, and there was as yet no nausea or vomiting. Several medical men had already tried, and failed, to return the prolapsed intestines. With their assistance I made various attempts in the same direction, but at first my efforts were equally unsuccessful. Notwithstanding the fact that three fingers could be passed through the neck of the sac into the peritoneal cavity, all attempts at reposition failed. Chloroform was then given in order to get rid of the resistance of the abdominal muscles. Reduction was not effected even then; only after I had made several incisions ·39 inch deep in the umbilical ring with a probe-pointed bistoury did a small portion of gut slip back. The rest slowly followed under the influence of gradual evacuating pressure. After all had been returned to the abdominal cavity the edges of the laceration were brought together with the ordinary twisted suture, a large pad of wadding with compressures was laid over the umbilical region, and the whole was kept in position by means of a large flannel binder. Opium was given to restrain peristalsis. The further course of the case was unfavourable, as the patient died twenty-four hours after the reduction of the mass. There were no symptoms of exudative peritonitis, pain and fever were absent, and tympanitis was moderate in amount; but during the next day gradually increasing collapse set in, apparently caused by the long-continued chilling of so large a surface of peritoneum. No post-mortem was allowed. Increased internal pressure had evidently caused the rupture of the sac at the moment of falling. I was under the impression that such cases as the foregoing are more common than they really seem to be. As, however, in the new herniological work of Professor Benno Schmidt[1] I find few such cases cited, and as no similar occurrence has been recorded in the *Centralblatt für Chirurgie* during the last eight years, I have had to modify my earlier opinion, and now for the first time publish this case. Probably many such accidents of an earlier period have remained unnoticed. Thus, for example, I find in Boyer-Textor the following passage, which I transcribe literally:[2]—" A woman, sixty years of age, of small stature and moderately fat, had had an umbilical hernia for twenty years, but never worn a truss. The tumour gradually increased in size till it was as large as an adult head, whilst its coverings were so thin that the coils of intestine became plainly visible whenever the mass was to any extent distended with flatus. At last the skin gave way as the woman was endeavouring to lift a bundle of washing. A tear some six or eight lines in length was the result, and intestinal prolapse at once followed. Called to the patient fifteen hours after the accident, I perceived that a coil of gut 10 inches in length had escaped through the wound in the integument; it was distended with flatus, and purple in colour. The patient had vomited twice, and there was constant nausea. The pulse was small and the countenance markedly altered. As it was impossible to return the intestines through the wound without first enlarging it, I made a small incision; but this was followed by such a rush of intestines through the opening that I had great difficulty in returning them, although zealously assisted by the family surgeon. The wound was closed with the furrier's suture. The patient died in twenty hours, and no autopsy was obtainable." The similarity between Boyer's case and mine is unmistakable. In his the rupture was caused by increased internal pressure; but the wound was not large, corresponding to the smaller amount of force exerted (that of the abdominal walls alone), and the original prolapse was not extensive. But, on the other hand, on account of the smallness of the tear and the long continuance of the prolapse, evident symptoms of strangulation were superadded. The latter, although absent in my own case, would doubtless not have been long delayed had the attempts at reposition been unsuccessful. In these days of antiseptics we may look with confidence for better results.—Carl Fieber, in *Wiener Medizinischen Blätter* (separat Abdruck).

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[1] Billroth and Pitha's *Handbuch*, Stuttgart, 1878.

[2] *Vollständiges Handb. d. Chirurg., v. Baron Alexis Boyer in's Deutsche uebertragen u. vermehrt v. Cajetan Textor*, Würzburg, 1840, B. viii. S. 279.

SYPHILITIC INFECTION THROUGH SKIN-GRAFTING.—A man 49 years old had suffered from gangrenous erysipelas, which had left behind it a large granulating surface. Numerous skin-grafts were applied to the sore, but a month after the transplantation the new tissue commenced to ulcerate, and this was followed by a syphilitic roseola. It was afterwards found that the patient's son (æt. 25), from whom the grafts had been taken, was suffering from secondary syphilis. Under specific treatment the ulcerated surface slowly healed (Deubel, *Gaz. Méd. de Paris*).—Th. Kölliker, in *Centralblatt für Chirurgie.*

Part Fifth.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine on the 8th of June, and were admitted L.R.C.P. Ed:—Albert Henry Langridge, Dunstable; Percy Herbert Gardner, Surrey; George Frederick Price Pizey, Somerset; James Montford, London; Alfred Temple Perkins, London; William Mitchell Roocroft, Wigan; William Woolmington Webber, Somerset; John Charles Radclyffe Husband, Yorks; Edgar Elliott, Dorsetshire; John Graham Blyth, Stirlingshire; Henry George Stokes, Canterbury; Arthur Barthelemy Yves Jollivèt, London; Walter Humphries Montague, Toronto, Canada.

SECRET AND PROPRIETARY MEDICINES.—Dr Jordan, in the *Chicago Medical Times,* closes a well-written article on certificates given in favour of nostrums as follows:—"What a blessing secret and proprietary medicines are! In summary, these blessings may be briefly told: 1. The use of them destroys the confidence and respect of the patient. 2. They lead to a routine practice highly beneficial to the undertaker. 3. They lessen the labours of the physician by enabling the patient to do his own prescribing. 4. They lead to fatal delays in calling in the physician, thus improving the marble business. 5. They support medical journals and induce editors to put to shame the exploits of Munchausen. 6. They increase the rate of mortality, and thus aid in preventing the over-crowding of population. 7. They enable our distinguished professors to advertise themselves both to the medical and non-medical world, and very nicely enable the laity to find out the exalted merit of our professors and other great men. 8. They bring the medical profession to the level with patent-medicine men, and exalt the latter to the position of dictators to the medical profession."—*New York Medical Record.*

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PROFESSOR JAMES SPENCE.

JAMES SPENCE was born on 31st March 1812, in South Bridge Street, Edinburgh. His father was three times married, and Professor Spence with two sisters was the offspring of the third marriage—his mother being Miss Edwards, daughter of Captain Edwards, an officer who had distinguished himself in the American War. At the age of seven years young Spence was sent to Galashiels, where there was at the time a large boarding-school under the charge of Mr Fish, and there he received his rudimentary education. Some time afterwards he entered the High School of Edinburgh, where his education was completed, and at thirteen years old he entered the University.

Spence wished to enter the army, and with this view commenced the study of medicine in order to qualify as a military surgeon. This decision was made at an early age, with the approval of his father. Among the first steps in his professional career was his being apprenticed to Scott & Orr, an eminent firm of druggists then carrying on business in Princes Street. On completing his medical education at the University and the extra-mural school, which about that time could boast of not a few great names, he obtained the diploma of the Royal College of Surgeons in 1832, at the age of twenty years, an earlier period than that now allowed for examination. Previous to this, however, and in addition to his medical studies in Edinburgh, he spent some time in Paris, attending chiefly the surgical and anatomical classes. On obtaining his diploma he went up to London in order to get a commission either in the army or navy; but as he was too young for both, he went out, at the advice of Sir James Kemp, an old friend of his mother's, to Calcutta in the *Protector*, a ship belonging to the East India Company, and at that time a passenger vessel.

On his return the vessel was chartered as a transport for troops to India; and Spence, before rejoining, passed the extra medical examination then necessary. On the third voyage out he fortunately did not accompany the vessel, since it was not to carry troops, as on this occasion she was wrecked and all on board perished. Mr

Spence now devoted himself for some time to anatomy, when he was laid up with a severe attack of typhus fever. On his recovery he commenced practice in No. 14 Rankeillor Street; while at the same time he was demonstrator along with Mr Mackenzie under Professor Monro. Upon leaving the University dissecting-rooms as demonstrator there, he joined Drs Handyside and Lonsdale in the teaching of anatomy at No. 1 Surgeon Square. He had now removed from Rankeillor Street to Dublin Street, where he resided for many years, removing from there first to Northumberland Street, and next to the house in 21A Ainslie Place, where he died. In 1849 Mr Spence became a Fellow of the Royal College of Surgeons; in 1864 he was elected Professor of Surgery in the University of Edinburgh, on the death of Professor Miller; and in 1865 was appointed Surgeon in Ordinary to the Queen in Scotland in place of the late Dr David Maclagan.

Mr Spence thus may be said to have begun his career as a teacher as Assistant-Demonstrator of Anatomy in the University of Edinburgh. Here, giving attention to surgery as well as to dissecting-room work, he laid the sure foundation of his future success. In 1841 (*Edinburgh Monthly Journal of Medical Science*) appeared his valuable paper, "Remarks on the Sources of Hæmorrhage after Lithotomy," the result of special research founded on the dissection of the parts in 73 male subjects made during the three previous years. Mr Liston had somewhat sweepingly stated that if the incisions were properly placed "there will be no trouble from bleeding." Spence, however, maintained that in 11 of his 73 dissections, three of them cases of abnormal position of the artery of the bulb, and eight of them cases of large or unbranched prostatic artery, "these vessels must inevitably have been wounded, owing to their position." He expressed the strong belief that an unbranched prostatic artery is the chief source of danger by hæmorrhage. Some authors having expressed the belief that the artery of the bulb is generally divided, and Mr Liston having said that it runs no risk if the incisions are made low, whatever the course of the artery, Mr Spence, after performing the operation on six subjects, found the artery undivided in all, but closely grazed by the knife in one. He thought, however, that the normal artery must be often divided, and gave various reasons for the bleeding not being troublesome. He was particular in showing that in the variety in which the accessory pudic courses along the prostate, it is placed so as to run no risk of being divided in the lateral operation. In all of six cases it lay above the prostate, or at least above the reflexion of the fascia. In some cases mentioned by authors, in which this artery was said to lie at the side of the prostate, it is probable that the precise anatomical relations of the abnormal artery had not been so carefully observed. He considered, also, that the venous plexus on the side of the prostate, when dilated in old persons, was a formidable source of hæmorrhage.

Mr Spence, however, was no mere surgical anatomist. In 1842 appeared (*Edin. Med. and Surg. Journal*, vol. lviii.), his "Inquiry into the Anatomy of the Eighth Pair of Nerves." His merit in this paper has not been sufficiently acknowledged, the important fact which he established—that the vagus nerve has a non-ganglionic part from its root, passing over the superior ganglion—being seemingly unknown to the authors of our anatomical text-books. He shows that this "small, flat, and white filament, which I traced up over the superior ganglion," unites just below that ganglion with the internal division of the spinal-accessory, and that the pharyngeal branch of the vagus is there formed from these two sources jointly. It has been customary in this country to quote Bendz, who wrote in 1836 to some such effect. John Reid, in his celebrated paper on the functions of the eighth pair of nerves, published in 1837, fell into this mistake, saying that Bendz had "seen in the rabbit some of the filaments of the vagus pass the superior ganglion placed on this nerve." But Dr Reid, who was a thoroughly candid man, acknowledges, in a letter quoted by Mr Spence, that "on looking at the original it appears pretty clear that he means the inferior ganglion," and that it is so Spence shows by quoting the original Latin of Bendz's paper. The merit, therefore, of this important contribution to anatomy belongs to Mr Spence. The fact that this has not been recognised in our text-books of anatomy is an instance of the exercise of that telescopic faculty which prefers to render honour to distant writers. The demonstration of such an anatomical arrangement was the more valuable as it afforded, as he remarks, a means of explaining the seeming discrepancy between the experiments of Reid and Longet on these parts of the eighth pair of nerves. The fact was confirmed by repeated dissections, and the dissection from which the plate in Spence's paper was taken was placed in the anatomical museum of the University. The paper is a model of anatomical writing, and a perusal of it, though written forty years ago, will amply repay the anatomist or physiologist of the present day.

In 1842, as has been already stated, Mr Spence left the University school to teach extramurally. During his demonstratorship in the University, extending over about seven years, as the Professor of Anatomy was Monro *tertius*, and William Mackenzie senior and permanent demonstrator, the circumstances must have been depressing to Mr Spence. Sir Charles Bell, Professor of Surgery, was the anatomical and physiological light in the University at this time. It was he, probably, who had encouraged Spence to investigate the anatomy of the eighth pair of nerves, and on the going out of this light with the death of Charles Bell in 1841 he probably felt that it was time for him to leave for the extramural school. There Knox had been holding forth to large classes, and other extra-mural lecturers had found it easy work to have a class during the reign of Monro *tertius*. Mr Spence had arranged to join with Dr Handyside in teaching anatomy at No. 1 Surgeon Square, and they were there joined by Dr Lonsdale, the nominal successor of Dr Knox. Here, in what Knox wittily called "the Polygastric Institution," Mr Spence taught anatomy for four years, while also attending to his surgical practice. It was the largest and best conducted school of anatomy then in Edinburgh. He took no part in the systematic qualifying course of lectures, not being as yet a Fellow of the College of Surgeons, on account of the very large entry-money then required. His part in the school lay in the dissecting-room and in giving a considerable share of the supplementary lecture-room course, then known in Edinburgh as the demonstrations. When his turn came to appear in the lecture-room he was always more than well received. His dissection was invariably nicely made. He spoke easily, and with the earnestness of a man who was master of his subject and believed in it, stuck to his text, and maintained the proprieties of the lecture-room. There was no pomposity, though that we could forgive for the good teaching that went with it, and none of that attempt to imitate Knox, with inevitable failure, which so disgusted the class from another quarter. Spence was always listened to with respect, and was a most successful lecture-room teacher. While at home in all parts of anatomy, it was his exposition of the surgical regions, such as the parts concerned in hernia and lithotomy, the neck, the parts involved in operations on the great arteries, the tendons concerned in club-foot, and the like, which most impressed the class, and left an enduring recollection of the teaching and of the man. To hear Spence on Scarpa's or Colles's fasciæ, or on the pelvic fascia, on lithotomy, or on tying the subclavian or carotid, were things to which the students ran with eagerness. It was the highest anatomy going in Edinburgh at that time (as, indeed, the surgical aspect must always be, as the *sine qua non* in a medical school), and Spence certainly inspired the students with interest in it. In the dissecting-room, during part of the day, Mr Spence was to be seen going round in his blouse and cap, insisting on good dissecting, and not above sitting down to show the young dissector how to use the knife and how to make out the parts. He was not one of those who got quit of difficulties by "cut it away."

In 1845–6, Dr Lonsdale having left Edinburgh, Mr Spence gave the course of demonstrations, Dr Struthers taking the work of the dissecting-room. In consequence of the appointment of John Goodsir to the Chair of Anatomy in the University in 1846, various changes took place in the extramural school. Dr Handyside, along with Dr Struthers, removed to the School at No. 11 Argyle Square, and Mr Spence relinquished teaching anatomy. During the next two years, although not giving a systematic course of lectures on surgery, Mr Spence gave lectures on special parts of surgery; and in 1849, having now been able to surmount the financial obstacle to obtaining the Fellowship of the College of Surgeons, he began to lecture systematically on surgery. Commencing at No. 4 High School Yards, where Miller, and before him Liston, had lectured, he removed in 1854, on the death of Dr Richard Mackenzie, to the lecture-rooms at Surgeons' Hall, where he continued to teach surgery till his appointment, ten years afterwards, to the Chair of Surgery in the University.

While teaching anatomy Mr Spence made many preparations of anatomy and surgical pathology, and was a most skilful dissector. Various fine arterial preparations dissected by John Bell, Liston, Fergusson, and Spence may be seen in the Edinburgh museums. Those of Fergusson are very good, but the hand and foot of Spence surpass those of his predecessors, and are really beautiful productions. His dog's neck, showing the collateral circulation after ligature of the arteries, is also a beautiful preparation. Fergusson was well known to have an extraordinary familiarity with everything in anatomy relating to surgery, obtained during his long demonstratorship with Knox, but probably no one has ever equalled Spence in this respect, or surpassed him in accurate knowledge of everything that the scalpel can display in the human body. It was quite a pleasure, as he operated, to see how easily he went on, as if he saw through the skin how everything lay. All that anatomical work implied much more labour and sacrifice than those who have not engaged in it are aware. When others were going out to dinner or to places of amusement, Spence might be seen walking up the Bridges on his way back to his evening work in the dissecting-room; and many summer evenings, and that over many summers, were thus spent in solitary devotion to anatomy and surgical pathology. He was well entitled to make the remark, which occurs in his paper on the sources of hæmorrhage after lithotomy, that "however lightly 'the surgery of the dissecting-room' may be held by some, I doubt not the majority of the profession will admit that it is the best foundation of operative surgery at least." That he illustrated by his subsequent career, and has therein set an example to all young men who hope to rise to real eminence and happiness in surgery. In his after-teaching of surgery, however, and in his operating, he was not in the habit of obtruding his anatomical knowledge, like some who are fond of showing off what knowledge of that kind they may have. He took that for granted, founding on it and using it. All who attended his anatomical teaching respected and believed in him as the coming surgeon of Edinburgh, and would, we believe, even at that early period, have had him, if need be, to operate on them rather than those who had seen more surgical practice than he yet had. Mr Spence's anatomical teaching over these long years, together with the beauty of his dissections, has had an influence on the schools of this country far beyond Edinburgh. There are anatomical as well as surgical lecture-rooms in which his methods and views are taught by his pupils and by their pupils, and it is to be hoped not without due acknowledgement.

As a hospital surgeon he was remarkable for the extreme care and attention which he bestowed on the examination of the case, on the preparation of the patient for operation. He neglected none of the old-fashioned precautions of attention to the tongue, the bowels, and the kidneys. Sometimes, with a constitutional pessimism, he almost overdid the preparation, to the discouragement of the patient.

Before the operation every instrument needed, and every detail of the dressing, received his careful personal inspection. The favourite knife was selected; in some special operations in hospital even a particular bed was commanded to be prepared.

Before the operation it was easily seen that Mr Spence was nervous, preoccupied, overstrung, but the moment the first incision was made he was at his best. Not brilliant, nor rapid, except in lithotomy, in which he was an adept, but careful, accurate, with every step prearranged, and every anatomical detail expected, recognised, and noted, it was obvious that the patient was receiving of the best that Mr Spence could give him, and that few could beat that best. Perhaps not so calm or fertile in expedient as Syme, so brilliant as Fergusson, Mr Spence was on the whole a great and successful operating surgeon.

As a teacher of surgery in the theatre he did not pretend to be eloquent. Neither voice nor manner were ever effective—of late years they were on the wane; but the excellence of his matter, and the sound sense and fixed principles which guided all his theory and practice, made his lectures valuable, and they were appreciated by all the older and wiser students. Probably where he shone most was in the short, unpremeditated explanations he used to give after an operation, especially after a primary amputation or a herniotomy at night. As a bedside teacher he varied according to his mood, which depended to a certain extent on how his patient was looking, and on his audience, whether attentive or lazy; but no one could follow his practice without learning much of that wisdom which is not mere knowledge, but is the fruit of experience.

As a writer on surgery he never wrote unless he had something to say, and said it with a certain puritanic simplicity which at times rises to an almost prophetic sternness. His treatises and lectures are not easy reading, but, when mastered, they will be found accurate, precise, and full of information.

As an authority on certain special subjects Mr Spence had few equals living or dead. On tracheotomy, herniotomy, the treatment of urinary diseases, and on amputation, his observations and opinions are of quite unique value. He was rather conservative, and, especially in later years, difficult to teach or convince, but he generally was able to render a very good reason for this fixity of opinion. New-fangled dressings and everything of the nature of thaumaturgy were his abomination, and neither recent pathological nomenclature nor theories of putrefaction and sepsis ever really got any hold of his memory or imagination.

As a consultant Mr Spence gave his best endeavours, sparing neither time nor trouble to make his opinion of use, and in a difficult or doubtful case no one could be better. But an occasional dryness of manner made at times the patient think him unsympathetic, and an utterly unintended brusqueness or directness made the doctor fancy himself misunderstood or undervalued; hence he often lost a consultation which his position and knowledge deserved.

Naturally of a cautious tendency, he could not communicate the indescribable feeling of hope which a great surgeon, even in the most desperate cases, diffuses around him by a kind of magnetic faculty. He was a man of what may be termed an anxious temperament and a somewhat tristful disposition. In no case, either in his own surgical practice, in professional politics, or in private life, was he unprepared for the worst. Not that he felt any want of confidence in himself or in what he did, nor any doubt in the capabilities of others; but no possibilities were lost sight of, no difficulties blinked at or glossed over, and no mere theory or hypothesis, however plausible or specious it might be, ever readily found much favour in his eyes until it was verified by actual experience.

He was possessed of very considerable æsthetic and artistic taste. Even in the matter of dress he was scrupulously neat and particular, while all objects devoted to the internal decorations of his dwelling-house displayed a punctilious refinement and a classical and cultivated mind. And although at first sight many might be inclined to set him down as of a gloomy or, as it was more commonly expressed, of a dismal character, no one could be very long in his company without discovering how much genial humour he had in store, how much he relished a good joke, and how a merry twinkle lightened up his countenance at a humorous story or an amusing incident, even although on some occasions either might be at his own expense.

No one was more sympathetic or tender-hearted than Mr Spence. In his own family circle he was an affectionate and dutiful husband and father, and beyond it many a one found him a loving and generous friend. It was this natural gentleness and aversion to be the cause of suffering in any shape that required him, in operating, to nerve himself to the task; and it was this strain upon his nature, this putting on of a rough exterior, that sometimes led to the supposition that his feelings were naturally blunted, and his compunction at the infliction of pain very inconsiderable. Those who knew him best, however, knew this to be a mistake. What he did was done as kindly as conscientiously. Honest work at his profession, unrewarded for years, honest dealing with his professional brethren, a life honest and of good report,—these attributes and labours made him, with no advantages of wealth or station, with no truckling, canvassing, or self-seeking, to end his days universally respected as the head of surgery in Scotland, and Professor of Surgery in the University of Edinburgh.

CORRESPONDENCE.

To the Editor of the Edinburgh Medical Journal.

New York, 1st *May* 1882.

Sir,—Will you kindly call the attention of the readers of your Journal to the proposition which I am about to make?

A "System of Gynæcology by American Authors" is in process of preparation, and it is intended that this shall be as nearly encyclopædic as possible. To me has been allotted the task of writing the chapter on the "History and Statistics of Ovariotomy." To obtain complete statistics of all ovariotomies done in the three-quarters of a century of the history of the operation is a task quite impossible, as many of the earlier ovariotomists are dead, and their records lost. Even among the living many may be disinclined to co-operate with me, as they should. Although the report of each operator's cases may cost him some time and trouble, you will readily see what a valuable fund of information will be obtained by the collation and arrangement of all the facts to be gained. It is desirable, too, to have all material ready for the press by the end of this year,—so that the sooner the returns are made, the lighter will be the task of the editor. Please request all who wish their cases published to send me the reports before September 1 prox. May I request your earnest co-operation in the matter, that the work may be worthy the great subject in hand.

The questions to be answered are as follows:—1. Name of Operator? 2. Age of Patient? 3. Nationality? 4. Married or single? 5. Aspiration or previous tapping? 6. Duration of growth? 7. Laparotomy or vaginal Operation? 8. Condition of patient at time of Operation? 9. Were antiseptic precautions used? 10. Was the spray used? 11. Long or short incision? 12. Adhesions or other complications? 13. Double or single Ovariotomy? 14. Pathological features of Cyst? 15. Treatment of the Pedicle? 16. With or without Drainage? 17. Duration of Operation? 18. Complicated or Uncomplicated history after Operation? 19. Anti-Pyretics used, if any? 20. Result. Cause of death, if any? 21. Primary or Secondary Operation?

Let the answers be as concise as possible. In many cases a simple yes or no will suffice. Will you kindly assist in giving the greatest publicity possible to this notice, and publish it in your Journal? Blanks, containing lists of the questions referred to, will be sent to any address. All communications should be addressed to me at 191 Madison Avenue.—J. E. Janvrin.

THE BOSTON
SOCIETY FOR
MEDICAL
OBSERVATION

Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*On the Uterine Sound.* By ALEXANDER RUSSELL SIMPSON, F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University of Edinburgh; President of the Obstetrical Society, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

(Communicated to the Edinburgh Obstetrical Society, 9th November 1881.)

THE introduction in practice of the Uterine Sound gives the clearest date for the birth of modern gynecology; and no man is fitted to be a gynecologist who has not learned to appreciate and employ it. Before the sound came into definite use the physical diagnosis in pelvic diseases confined itself to abdominal palpation, percussion, and auscultation, supplemented by the exploration of the vaginal canal with the finger and the speculum. Some of the physiological or pathological changes in the uterus or ovaries might be thus recognised when enlargements took place which lifted them up out of the pelvis, or even the affections of the cervix uteri might be fairly exposed. But the greater proportion of those changes in the pelvic organs with which the last forty years have made medicine familiar were but vaguely guessed at, and many of them were quite unknown, until the sound came in to diagnose them. Its importance, however, lies not merely in the circumstance that it first enabled physicians to recognise, *e.g.*, important displacements of the uterus previously unsuspected. It was the first implement that was employed to bring the higher spheres of the sexual organs within range of the sense of touch, and its introduction led on directly and speedily to the employment of tents and other dilators, of volsellæ, and, above all, of the systematic bimanual exploration which so often renders its own use unnecessary now. Therefore it is that we regard it as the most distinctly epoch-making instrument in the gynecological armamentarium.

As the use of the sound was essential for the perfecting of gynecological diagnosis, the past and passing generation of gynecologists taught themselves by it how to recognise many of the morbid conditions which they have taught us to recognise by the unaided sense of touch. The uterine deviations, for example, were at first brought within the sphere of observation and treatment by means of the sound. And although, with growing experience, the power has been acquired of easily and certainly differentiating a small fibroid from a retroflexion of the uterus by the bimanual examination of a patient, each new gynecologist has to confirm or correct for a time the results of his manual explorations, and teach his fingers what they really feel by the use of the sound; and to the end of his practice he will constantly meet with patients in whom he finds it necessary to employ it. Let me ask your attention to—

I. THE INFORMATION GAINED BY USE OF THE SOUND.

In the earliest memoir[1] published regarding the systematic employment of a sound, or bougie, or probe, for the investigation of uterine disease, the various directions in which it was to prove of service were very clearly indicated, and the experience of many years has confirmed the estimate first formed of its importance as an aid to diagnosis.

1. *Condition of the Cervix and its Orifices.*—The finger may feel, or, through the speculum, the eye may see that an os externum is abnormally small; but it requires the sound to tell us how far the narrowness extends, and whether the canal is expanded above. In some cases of fissuring and cicatrization at the os it is only by means of it that we can actually find out in what part of a furrow the orifice is seated. And where it passes easily through the lower part of the cervix it may, on the one hand, show us a contraction, or, on the other, an unusual expansion of the os internum.

2. *State of the Uterine Cavity.*—Passed up into the interior of the uterus, it sometimes lets us know that the cavity is occupied by a neoplasm or other substance, or tells us that it is empty.

3. *State of the Uterine Walls.*—When its point comes in contact with the fundus it may cause a sense of pain which helps the diagnosis of endometritis. The distinction between endocervicitis and endometritis may be further established by noticing the evidence of the internal vascularity from the sound having caused the escape of a drop or two of blood, or we feel roughnesses on the internal surface; or with the fingers pressed against the abdominal walls we may note that the uterine parietes are unusually thick or thin.

4. *Length of the Uterus.*—The experienced practitioner learns in the course of time to get a pretty accurate idea of the size of the uterus by means of a careful bimanual examination. There are various circumstances, however, such as the varying thickness

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[1] Sir James Y. Simpson's *Selected Obstetrical and Gynecological Works*, edited by Dr J. Watt Black, 1871, p. 604

of the abdominal walls, the varying degrees of resistance of the uterine tissues, etc., which may easily give rise to error; and there are cases where the organ cannot be felt in its outlines, and where, therefore, its size cannot be determined. In all these conditions the sound comes in to correct or confirm our impressions, or to give us the information which cannot otherwise be gained. The sound thus reveals, 1*st*, *Increase* in the length of the uterine cavity. The varying size of the puerperal uterus, *e.g.*, whether natural or morbid, can be measured by it. The persistent enlargement of subinvolution; the increase in the cavity so commonly associated with fibroid developments in the walls; and the peculiar hypertrophic elongation of the cervix which may so readily be confounded with simple descent of the uterus; all these are conditions the recognition of which is most directly effected by the use of the sound. On the other hand, 2*nd*, *Diminution* in the length of the uterus, as revealed by the sound, may enable us to recognise imperfect developments of the uterus or the atrophy of simple involution, while the observation that the point of it is arrested at every side around a body projecting through the external os enables us to differentiate an inversion of the uterus from an intra-uterine polypus in process of extrusion.

5. *Direction of the Uterus.*—The important part played in the production of pelvic distress by the deviations of the uterus from its natural position was first brought to light by the use of the sound. For the most part we can now diagnose them by bimanual examination. The practised fingers introduced into the vaginal canal can recognise the normal anterior inclination of the uterus, or a well-marked case of retroflexion; and when the vaginal touch is supplemented by abdominal palpation in a case where the abdominal walls are not too thick or resistant, this abdomino-vaginal exploration gives an amount of certainty in the diagnosis that leaves nothing to be desired. Such perfect outlining of the uterus with the fingers, however, is not always possible, and then we are compelled to tell ourselves how the fundus uteri is turned by noticing in what direction we can make the sound enter. And until the physician has learned how to use two fingers simultaneously in the vagina, keeping the one in contact with the os and cervix whilst the other moves about the body of the uterus, and has learned how at the same time to apply his other hand above the pubes so as to press the uterus more fully within reach of these exploring fingers, he will need to have recourse to the sound to satisfy himself as to the exact lie of the body of the uterus. And he will not have recourse in vain.

6. *Relations of the Uterus.*—Besides enabling us to determine these important matters concerning the uterus itself,—its canal, its cavity, its walls, its size, and its situation,—the sound gives us valuable information regarding the relation of the uterus to the pelvic contents. Thus in tumours springing from the pelvic

organs it is sometimes difficult by simple manipulation to determine whether they be of uterine or ovarian origin. Now, apart from the importance of the accurate determination of change in the length of the uterus which we can make with the sound, it tells whether the tumour springs from the uterine walls or is of independent origin. For, in the case of a uterine tumour, whether it be still pelvic or have grown abdominal, a sound passed into the uterine cavity is felt or seen to be moved about under the motions impressed on the neoplasm through the abdominal walls; or, conversely, the hand applied to the mass through the abdominal walls feels a movement imparted to it when the uterus is moved from side to side with the sound. On the other hand, a tumour which does not communicate its movements to the uterus, or which remains stationary when the uterus is pulled in different directions with the sound, has usually its seat in the ovary or other organ separate from the uterus.

II. Therapeutic Uses of the Sound.

The instrument that serves such good purpose in the detection of some of the morbid conditions of the uterus is also occasionally useful for their treatment.

1. *Reposition of Displaced Uterus.*—By means of it we can very safely and simply lift up, *e.g.*, the retroverted uterus. I do not stay here to note the conditions justifying and demanding or contra-indicating reposition generally. I merely repeat what I have before stated in this Society and verified in practice a hundred times over, that an ordinary uterine sound properly used will replace the uterus as easily, and painlessly, and safely as any other appliance. I suppose I have tried all the various methods of reduction of the dislocated uterus that have from time to time been proposed, manipulative, postural, and instrumental, and I always find myself falling back on the use of the sound in preference to all the others. It is often absolutely necessary to keep up the uterus in proper position with the point of the sound whilst a vaginal pessary is slipped over the handle and introduced to keep the uterus permanently *in situ.*

2. *Relief of Dysmenorrhœa.*—In some cases of dysmenorrhœa the introduction of the sound for half an hour or so when menstruation is commencing wards off a patient's monthly pain.

3. *Relief of Amenorrhœa.*—In other cases of scanty menstruation, or where there is a tendency to more complete amenorrhœa, the flow will often be promoted or provoked by the sound passed for some days in succession at the menstrual epoch.

4. *Applications to Uterine Cavity.*—The sound may be used for carrying caustic up to the fundus uteri by being dipped in some nitrate of silver which has been melted in a watch-glass; or liquid medicaments of various kinds may be introduced by a film of cotton-wadding, which can be securely twisted round the sound if the point of it be first carefully moistened with water or glycerine.

5. *Starting Uterine Action.*—To induce premature labour in certain cases we may pass the sound between the ovum and the uterine walls; and where the indication arises in earlier months for procuring abortion, the surest and safest method is to pass a sound into the cavity of the ovum.

III. CHARACTERS OF A SERVICEABLE SOUND.

For exploratory purposes different kinds of rods may be used for probing or sounding the uterus. A gum elastic male catheter or bougie may, in an emergency, be used in any case; and where the uterine canals have become tortuous as well as elongated, as in some of the cases of uterine fibroids, such a flexible sound is the best we can employ, and is sometimes the only one that will worm its way through the sinuosities so as to enable us truly to measure the length of the cavity.

An ordinary surgical probe has sometimes yielded the necessary information; and where the external orifice has become partially obliterated, such a fine rod may discover a pervious os which is yet too contracted to allow of the passage of the ordinary sound.

In cases of hæmorrhage where there is a suspicion of the presence of fragments of ova, or polypoidal endometritis, or cancerous degeneration, and where, accordingly, we have a desire to obtain a scraping from the inner wall of the uterus, we may at once introduce a curette. I sometimes thus use a Recamier's (see Fig. 1) or Thomas's (see Fig. 2) curette as a sound. But I think it important to note that with this in view I have added to the stem of these curettes a ridge at two and a half inches from the point, so as to enable us easily to appreciate the depth to which it has passed within the uterus. The presence of this ridge in no way interferes with the working of it as a curette. On the contrary, even when we have otherwise previously ascertained the size of the uterine cavity, it is a comfort to know precisely at what depth within it the curette is clearing away any projections from its surface, and this knowledge we obtain at once in using a curette so marked.

But for systematic investigation of the pelvic organs a sound of special construction is required. The qualities of a serviceable sound were correctly given in the well-known essay of Sir James Simpson to which I have already referred (see Fig. 3). It has sometimes been alleged that he used an inflexible instrument. Certainly he used for the most part sounds made of German silver, a metal which at the time seemed to him to have the advantage of being cheaper than silver and less liable to corrosion than copper, though it was less flexible than either of these metals. But his sound was not the rigid, inflexible instrument it is sometimes represented as being. In his own hands every hour its curve was undergoing change. The flexibility which is desiderated, however, in combination with cleanliness, in a not too costly instrument, is best found in a sound made of copper and plated with silver, and such is the material of which, in recent years, I have got my sounds made.

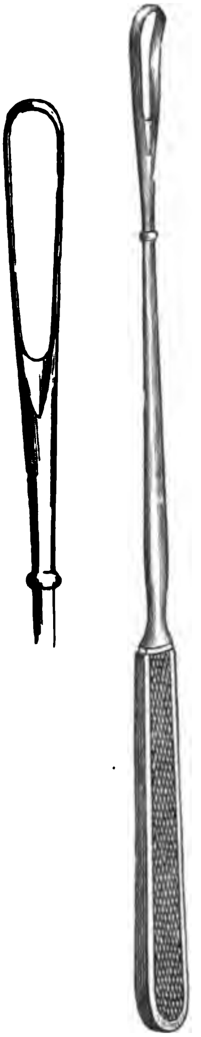

FIG. 1.—Recamier's steel curette, with a ridge 2½″ from the point. The figure to the left shows the end of the curette full size.

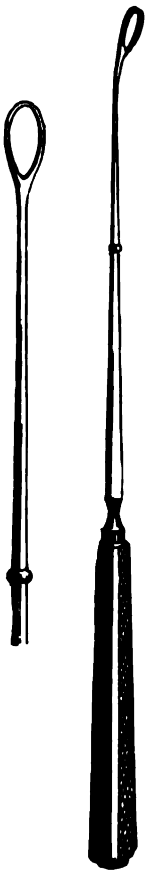

FIG. 2.—Thomas's dull copper curette, with a ridge 2½″ from the point. The figure to the left shows the end of the curette full size.

Apart from the question of the best material for the construction of the sound, there are some little modifications in the markings and in the make of it which seem to me sufficiently important to justify me in bringing them as I now do under your notice.

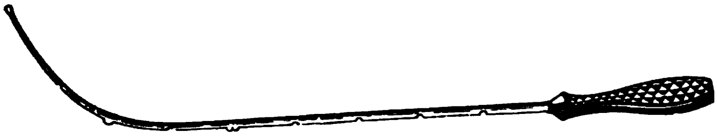

FIG. 3.—Sir James Simpson's Original Uterine Sound.

1. *Markings.*—The most important of all the measuring marks on the sound, that which renders a rod distinctively fit for use in uterine exploration, is the mark placed at 2½ inches from the point. In the sounds first employed this was indicated by a knob placed on the convexity of the instrument. It was often troublesome to feel this knob after the sound had passed into the cavity and the guiding finger happened to be in relation to the concavity of the instrument and had to be twisted round to touch the knob. Hence sounds have been made with the knob on the concavity of the sound or to one side of it. Some twenty or more years ago, with my uncle's consent, I directed the instrument maker to make the 2½-inch mark in the form of a circular ridge running all round the stem, instead of the simple knob. This slight modification has the great advantage of enabling the gynecologist readily to appreciate the progress of the sound through the canals, for the finger easily feels the ridge as it slides along the surface, whether the finger be in contact with its convexity, its concavity, or one of its sides.

I have said that the 2½-inch ridge is the all-important measuring mark on the uterine sound. Some of the marks that have usually been made on it may as well be eliminated. The notch, for instance, at 1½ inches from the tip is of no practical value, and so weakens the sound that it easily breaks across at it. Then the higher measurements are required only in cases of quite exceptional rarity. Hence a sound for general use requires, in addition to the prime ridge, only a double ridge two inches from the first, at 4½ inches from the point; between these a shallow circular notch to measure readily the frequent 3½-inch enlargement of the uterus; and perhaps a second shallow notch at 5½ inches from the point. These are all the markings that I find needful in the great run of cases, and they are easily distinguished in the sound which I ordinarily employ (see Fig. 4).

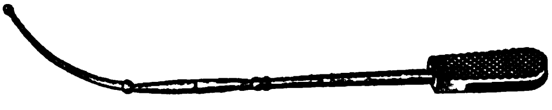

FIG. 4.

2. *Construction of the Sound.*—It will at once strike you that the sound which I show you now is shorter than the one with

which you have been long familiar. Now this shortening is not a mere matter of convenience to render the instrument more portable. If you look at it again you will see that the handle is changed in its form. Instead of becoming narrowed towards the point of junction with the stem, it has the form of an elongated square, with the stem springing from the centre of one end. The importance of this shortening of the stem and broadening of the handle becomes apparent when you take the sound in one hand and hold it with the index tip just touching the 2½-inch ridge, the very relation to it which in most cases the finger obtains after the sound has been passed into the uterus (see Fig. 5). You will

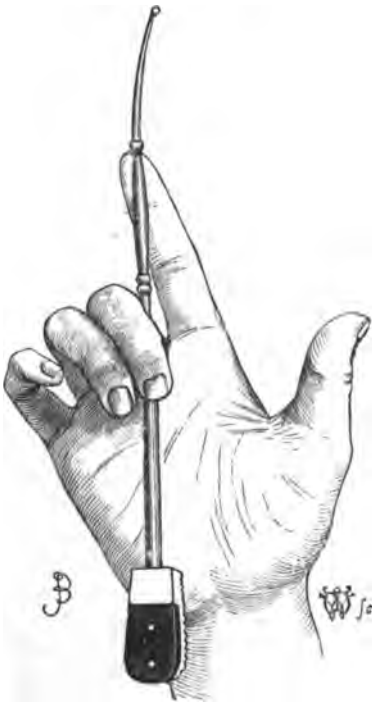

FIG. 5.—Shows adaptation of square handle of the 8-inch sound to the hypothenar eminence when the tip of the index finger touches the knob at 2½ inches from the point.

see that the handle rests squarely on the hypothenar eminence, and the hand has thus complete control over it in all its movements. If you attempt to make a bimanual examination of the uterus, applying the left hand above the pubes whilst the right holds a long-stemmed and narrow-handled sound in utero, you find that the hand has no adequate control over the movements impressed on the sound. When the uterus is moved by the supra-pubic hand, the sound rolls round in the hand that holds it; and if you wish to move the uterus by means of the stem, the finger must be withdrawn from the cervix so as to get the grasp of the handle that will enable you to impress on it the desired movement. With a square-handled sound the bimanual explorations become easier and more exact.

Different practitioners may prefer different lengths of sound. For most cases a stem that measures 5½ inches from the 2½-inch ridge to the junction with the handle will be found of convenient length.

IV. Mode of Using the Sound.

In every case where the sound is to be used the practitioner will have made a careful digital and bimanual exploration of the condition of the pelvic organs. He would not be warranted in introducing a sound without such preliminary investigation, nor would his mind be prepared to appreciate what the sound could reveal. He may then use the sound in one or other of two ways.

1. *Guided by the Eye.*—He may first expose the vaginal portion of the uterus with a speculum, and watch the progress of the sound with his eye. The only satisfactory kind of speculum for employment in concert with the sound is the Sims's, or some modification of his duck-bill or spatular speculum. The patient is placed in the semi-prone position, and when the posterior wall of the vagina has been pulled back with the speculum—held by an assistant if it be not self-retaining,—the examiner lays hold of the anterior lip of the cervix with a volsella or tenaculum, which he holds in his left hand, and then with his right he passes the sound on through the exposed and fixed uterine orifice (see Fig. 6). Where a practitioner is baulked in the effort to pass a sound guided with the fingers, he may have recourse to this mode of introducing it; or he may from the first prefer so to apply it, as in cases of uterine hypertrophy where he has already exposed the cervix and wishes simply to ascertain the size of uterus, the calibre of its canals, or the condition of its cavity, as a preliminary to curetting or making some application to its interior.

2. *Guided by the Finger.*—When the sound is to be introduced under the guidance of the finger, as in most cases it requires to be, the patient should be placed on her left side, with the knees drawn up in the usual British obstetric position. It is quite possible to introduce a sound into a patient lying on her back; but the process is not so easy, and, unless the nates have been brought over the edge of the bed or couch on which the patient is placed, the surface of the bed interferes with the free play of the handle of the instrument. The index of the right hand should be passed into the vagina till the tip of it is in contact with the os externum. I say the index alone, for even when we have had two fingers in the canal, as in most instances we require to have in order fully to appreciate the results of tactile exploration, it is necessary to withdraw the medius and guide the sound with the single finger.

It is enough, and the presence of the second finger in the canal in this stage makes it more difficult to turn the sound round in the vaginal canal. The sound, grasped by its handle with the left hand, is carried along the palm of the right hand and palmar aspect of the index until its point reaches and enters the os externum. It may be introduced through the vaginal canal with its point and the rough metallic surface of the handle turned towards the sacrum. Usually, when the point is engaged in the cervical canal, the handle has to be swept round so as to direct the point and concavity of the sound forward. No force must be used at any time in carrying on the sound through the canals. I insist on this. To push on the sound in any case with a force that would come near bending even a fine silver sound is, in my judgment, reprehensible. When the external os has been cleared, the part at which, in most instances, any difficulty is experienced is in the upper portion of the cervical canal, at, or just below the os internum. The difficulty usually depends on change in the curve of the canal, and is to be overcome, not by the use of force which simply hurts the patient and hinders the exploration, but by delicate changes in the direction in which the instrument

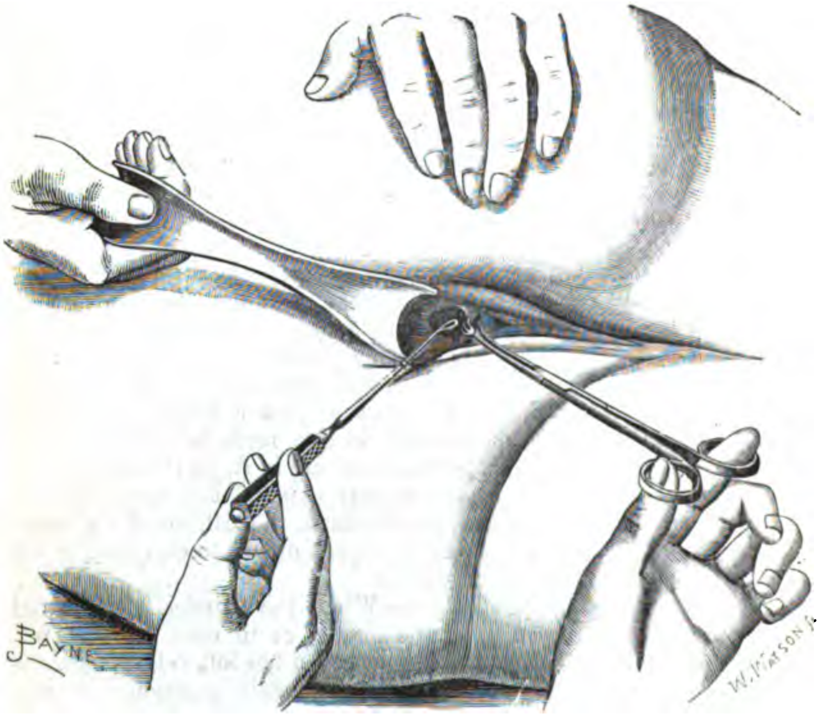

FIG. 6.—Shows the mode of introducing a sound or curette when the cervix uteri is exposed with a spatular speculum and fixed with a volsella.

is carried forward. In a large proportion of the most difficult cases what is needed is to press the handle backwards against the perinæum, and in some instances the sound should be withdrawn and have its curve deepened towards the point. It certainly requires some patient practice and distinct determination at first to succeed in introducing the sound in difficult cases; but when the necessary dexterity has been acquired, one feels that the trouble taken in a few early cases is well rewarded through all the subsequent years of practice.

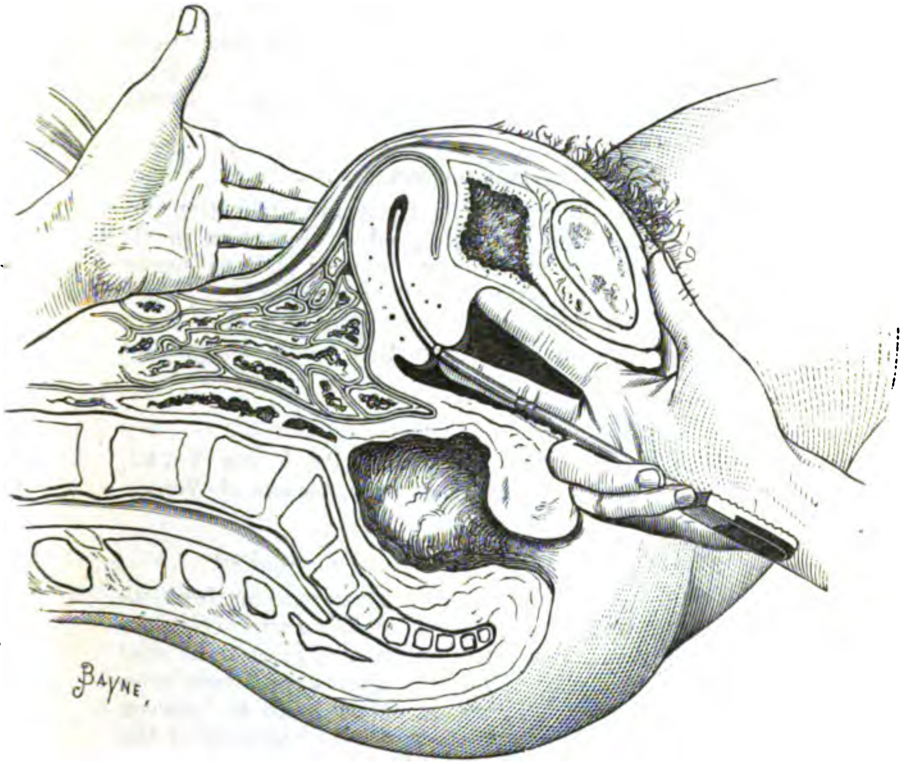

FIG. 7.—Shows the bimanual exploration of the uterus with the sound in the uterine cavity.

I have said that the sound is introduced by means of the left hand, whilst the point of it is guided by the index of the right. But I wish specially to emphasize the observation that we do not ascertain all that the sound guides us to by merely passing it into the uterine cavity. We ought to repeat our bimanual exploration with the sound retained in utero. Two right hand fingers may, and ordinarily should, now be in the vaginal canal; and the left hand is pressed down into the pelvis through the abdominal parietes (see Fig. 7). The patient may be made to change her position so as to lie more supine or more prone, or even in the genu-pectoral posture. If the sound be of the construction that I have indicated as most convenient for such combined exploration, it is easily held in position by the little finger of the right hand; and as it lies flat and firm on the hypothenar eminence it can fix the uterus or move it in different directions, whilst the fingers in the vaginal roof and the left hand through the abdominal walls are able to appreciate changes in the size, form, and relations of the pelvic organs that cannot otherwise be detected. One chief object of this communication is to insist on the importance of this method of bimanual examination with the sound in utero, as in the text-books this valuable kind of exploration is never fully explained and seldom even hinted at.

V. CONTRA-INDICATIONS.

I have only a word to add regarding the contra-indications to the use of the sound. It must be employed with caution in all cases of chronic *inflammation* of the pelvic organs; and the active inflammations form an absolute bar to its introduction. It is not free from danger at a *menstrual* epoch, and in any case where there is a possibility of *pregnancy* its introduction would be gravely culpable.

ARTICLE II.—*Graviditas Serotina et Præcox.* By PETER YOUNG, M.D., F.R.C.P.E., Lecturer on Midwifery and Diseases of Women in the Edinburgh School of Medicine.

(*Read before the Edinburgh Obstetrical Society, 31st May* 1882.)

A KNOWLEDGE of the duration of human pregnancy, apart from its physiological interest, is of importance as enabling us to calculate with some degree of probability when parturition in an individual case may be expected to occur. Besides, circumstances may arise in which, from the length of time which has elapsed between sexual intercourse and the birth of the child, the paternity of the latter may be called in question, and in this way important interests, both of a moral and material kind, will fall to be decided by the information we possess on the subject.

Judging from the evidence given in the famous Gardner peerage case, it would appear that the general opinion among medical men in England at the beginning of the present century was that the duration of human pregnancy never exceeds 40 weeks, or 280 days, while Dr Gooch and Dr Blegborough stated that 39 weeks, or from 273 to 275 days, constituted the normal duration of pregnancy. Sir Charles Clarke, indeed, in the trial above alluded to, said, "I have never yet seen a single instance in which the laws of nature have been changed, believing the law of nature to be, that parturition should take place 40 weeks after conception." While there was a difference of opinion as to the normal duration of pregnancy, all of them agreed that it never exceeded 40 weeks. It has now been abundantly established by numerous observations that the period of gestation is subject to considerable variation. In most of our text-books the period of pregnancy is stated as lasting from 270 to 282 days, while in the majority of cases parturition is said to occur in the 40th week, *i.e.*, from the 274th to the 280th day, reckoning from the day on which the catamenia ceased. It is admitted, however, by most recent writers that parturition may occur as early as the 265th day or as late as the 300th day. Beyond these limits, however, either by diminution or by excess, most authors decline to go, and cast doubt on the possibility of normal gestation terminating earlier or later than the periods mentioned. Of course, in discussing the duration of pregnancy it must be clearly understood that only those cases are included in which the child, at the time of parturition, is not only viable, but completely formed and mature, and that all cases of graviditas præcox, or abridged gestation, when the child is immature at birth, as well as all cases of graviditas serotina, or protracted gestation, in which the child is dead or diseased, are excluded from consideration. In the following communication I propose to record several cases of protracted and of abridged gestation, and then to discuss the circumstances which modify, or seem to modify, the duration of pregnancy.

I. *Graviditas Serotina.*

CASE I.—A. L., æt. 25, the wife of a painter, has always enjoyed good health and menstruated regularly up to the time of her marriage, which took place at the beginning of October 1880. On the 4th November she turned unwell, the catamenia lasting, as usual, three or four days. She again menstruated at the beginning of December, and a third time on the 3rd or 4th January 1881, the flow ceasing on the 8th. About a week after this her husband left home to assist in the decoration of a large house in Perthshire, and did not return till the beginning of June. As the catamenia which were due in the beginning of February did not appear, and she began to feel squeamish in the morning on rising, she considered herself pregnant, an opinion which was fortified by their continued absence at the next period. During the month of March she continued to suffer from the morning sickness, with occasional vomiting, but otherwise her health was good and appetite fair. At the end of May, shortly before her husband's return home, she quickened. At the beginning of September she called to ask me to attend her in her approaching confinement, which, calculating in the usual way, we thought would likely take place about the 15th October. About a fortnight afterwards I received a note stating that, as her husband had to go to the country again, and would likely be absent for some time, she had arranged to go to her mother's home, some distance from town, to be confined there. I naturally thought I would hear no more of her for some time at least, when, to my astonishment, her husband called one evening at the end of October to inform me that he had returned the day before, and that his wife, who had also returned home, had not yet been confined, and was anxious that I would again undertake to attend her. To this I agreed, and as her time was already past due, I expected to be called very soon. When, however, three weeks had elapsed without any message from her, I began to wonder at the delay, and called to ascertain the reason. I found her going about the house quite well, with no indications of labour pains. On examination per vaginam the head of the child could be felt at the pelvic brim, and unusually high up for a primipara; but with that exception, and the very prominent size of the mother's abdomen, there was nothing unusual to be noted. As she was now long past her calculated period, she was afraid that there must be something wrong. I assured her, however, that the child was alive, that there was no deformity of the pelvis, and that cases sometimes occurred of prolonged gestation, of which she was furnishing a well-marked instance. At last, on the 3rd December, at 10 o'clock P.M., I received a summons to attend her. Labour pains had commenced two or three hours previously, and were becoming stronger. On examination per vaginam the os was about the size of a sixpence, admitting only the point of the forefinger. The cervical lips were thin and hard, and the vaginal moisture moderate. The head of the child was situated over the brim, and showed no indication of dipping into the pelvis. As the rectum was partially distended with fæces, I ordered an enema, and left her with instructions to be called when the pains became stronger.

At ten o'clock next morning I called, and found that, with a short interval of about an hour and a half, the pains had been pretty regular all night, and during the last two hours had been of considerable strength. Examination per vaginam showed the vagina lax and moist, the os uteri dilated to the size of a crown-piece, and the cervix soft and dilatable. The bag of membranes was small, and the head of the child felt very hard and appeared to fill the entire pelvic brim. The tongue was clean and moist, and the pulse about 84. After waiting fifteen minutes I ruptured the membranes, but the quantity of liq. amnii which escaped was trifling. The anterior fontanelle, which was small, could now be felt on the right side of the pelvis and somewhat anteriorly, while the sagittal suture and the posterior fontanelle could not be made out, owing to the advanced state of ossification of the cranial bones. Finding at the end of an hour that the head was making little or no progress notwithstanding the presence of vigorous pains, and the os being well dilated and dilatable, I resolved to put on the forceps. The blades of the instrument were so introduced that when applied to the child's head they came to occupy a place in the left oblique diameter of the pelvis—one blade, as subsequent examination showed, being situated behind the left ear, while the other blade grasped the right frontal bone near the external angle of the orbit. In this way the head of the child was caught obliquely. By steady traction at intervals downwards and backwards in the axis of the inlet of the pelvis the head of the child was induced to enter the cavity, and by continuing the traction in the usual way the head was born in about six minutes, reckoning from the moment of the application of the forceps. The uterine contractions were allowed to complete the extrusion of the body of the child without any further aid than that afforded by moderate abdominal pressure with the hand. The child, a male, weighed 9¼ lbs., and the circumference of the head measured 15 inches. The other measurements of the head I refrain from giving, as, owing to the want of a pair of callipers, they are not trustworthy. Placenta weighed 24 oz. There was no post-partum hæmorrhage, and the mother made an excellent recovery.

Case II.—J. F., æt. 25, primipara. Has always had good health and menstruated regularly. On the 3rd August 1872 the menses ceased, when she became pregnant. About the middle of May 1873 she experienced slight pains for a day or two, but they disappeared, and did not return till the afternoon of 9th June. Pains gradually increased in strength, and the labour was completed without instrumental aid at 8 A.M. on 10th June. The child, a boy, was strong and vigorous, but was not weighed.

Case III.—A. S., deaf and dumb, æt. 32, pregnant for the third time. The catamenia ceased on the 7th July 1875; complained of morning sickness three weeks afterwards, and was delivered of a boy on 9th May 1876.

Graviditas Præcox.

Case I.—J. M., æt. 38, has had eight children. After nursing her eighth child fourteen months she weaned it, and the courses appeared ten or twelve days afterwards. They recurred at regular intervals twice, and finally disappeared on 5th September 1881. She then became pregnant, and was delivered of a mature, well-developed female child on the 17th May 1882. She states that she has usually had her children before the expected time, but none of them have been immature, and she has had no miscarriages.

Case II.—M. C., æt. 28, pregnant for the fourth time, ceased to menstruate on the 15th March 1872. During this pregnancy she felt unusually well and in good spirits. Labour pains came on the afternoon of 30th November 1872, and she was delivered of a full-sized female child that evening.

Case III.—J. D., æt. 35. Has had three children and two miscarriages. She became pregnant in October 1874, the catamenia having ceased on the 4th of that month. At the beginning of

February 1875, after a long drive over a rough road, there was slight hæmorrhage per vaginam, with threatening of labour pains; but by rest and opiates these symptoms disappeared, and the pregnancy went on till 25th June, when she was delivered of a full-sized male child.

Of the above three cases of prolonged gestation, in the first case a period of 334 days elapsed between the disappearance of the menses and the occurrence of parturition, in the second case 311 days, and in the third case a period of 306 days. Of the cases of abridged gestation, in the first a period of 254 days intervened between the last appearance of the catamenia and parturition, in the second case a period of 260 days, and in the third a period of 264 days.

With regard to the cases of protracted gestation, it is not implied that the pregnancies actually extended to the periods above mentioned, as pregnancy can only be said to commence when the spermatozoa meet the ovule and impregnate the latter; and as this may occur at any time during the interval before the expected return of the next catamenial period, it is obvious that a deduction of about 23 days may require to be made in order to arrive at the real duration of the pregnancy. In the first of the cases it will be observed that the husband left home on the 15th or 16th January; and as the birth of the child did not take place till the 4th December, we have an interval of 325 or 326 days between insemination and parturition, although, for reasons to be afterwards adduced, the duration of the pregnancy may have been shorter. In the other two cases, where there was opportunity for continuous sexual intercourse, impregnation may not have taken place till the end of the catamenial period, when the actual duration of the pregnancies would be respectively 288 and 282 days. With reference to the cases of abridged gestation, it is probable that impregnation occurred immediately on the cessation of the menses, although it may be maintained by some that the pregnancies began before the appearance of the last catamenial flow, and that their duration was not really shorter than usual.

Sir J. Y. Simpson (*Obstetrical Works*, p. 81, vol. i.) has recorded four cases of protracted gestation which lasted respectively 336, 332, 319, and 324 days after the last day of the catamenial discharge; or, deducting 23 days as indicating the probable time when pregnancy began, we have 313, 309, 296, and 301 days as the intervals between the expected return of the menstrual flow and the occurrence of parturition.

Hodge mentions the case of a lady whose menstruation ceased on 21st January 1843. She experienced nausea early in February, and was delivered on the 17th December, 330 days after the disappearance of the menses.

Meigs of Philadelphia reports a case where the pregnancy lasted about 14 months, or 420 days; and Atlee of the same city has published two cases where the pregnancies lasted 365 days. These cases recorded by Meigs and Atlee, although given in good faith, are probably grounded on some fallacy, and can hardly be admitted as veritable occurrences without further corroboration.

Sir J. Y. Simpson, in the paper already referred to, has thrown into a tabular form the results of a long series of observations, amounting altogether to 782 cases, made by Dr Merriman, Dr Murphy, and Dr Reid. As the table shows in a succinct form the weekly percentage of deliveries calculated from the last day of last catamenial discharge, I take the liberty of reproducing it:—

Weeks.	Days.	Merriman.	Murphy.	Reid.
37th	From 252nd to 259th	2·65	7·14	4·60
38th	„ 260th to 266th	11·40	8·33	9·60
39th	„ 267th to 273rd	12·28	16·07	16·20
40th	„ 274th to 280th	29·00	16·66	26·20
41st	„ 281st to 287th	19·30	23·21	22·40
42nd	„ 288th to 294th	13·16	12·50	12·60
43rd	„ 295th to 301st	8·77	14·86	5·60
44th and upwards	„ 302nd to 324th	3·50	1·20	2·80

From the above table it will be seen that the duration of pregnancy, as calculated from the last day of the last catamenia, is subject to very considerable deviations. Even in cases where pregnancy is the result of a single coitus, the duration of gestation is by no means uniform. Thus, of 40 cases collected by Dr Reid, where the date of insemination was accurately known, the duration of pregnancy, as calculated from that period, varied from 260 to 294 days, while nearly one-half of the pregnancies terminated between the 274th and 280th days. It will be observed that between the longest and the shortest pregnancies recorded by me there is a difference of 80 days. According to Spiegelberg, the primiparous and the married states are more favourable to prolonged gestation than the opposite conditions.

In Ahlfeld's tables the bulk of the confinements vary within narrow limits. Of 653 pregnant women, 15·93 per cent. were delivered in the 38th week, 27·56 per cent. in the 39th week, 26·19 per cent. in the 40th week, 10·01 per cent. in the 41st week. Of the remainder, 14 per cent. occurred prior to the 38th week, and 6 per cent. later than the 41st week. The difference between the longest and the shortest pregnancy was 99 days. Of 425 cases of pregnancy the result of a single coitus, Ahlfeld found the average duration 271 days. Of 46 similar cases collected by Matthews Duncan the mean duration was 275 days, while Veit found the average of such pregnancies last 276·42 days. Nor are the irregularities of the duration of pregnancy confined to the human female; they are also found in the lower animals, and sometimes to a very marked degree. According to Tessier, Krahmer, and Spencer, the average duration of pregnancy in rabbits is 31 days, but may vary to the extent of 8 days; in sheep the average duration is 151 days, but may vary 26 days; in cows the average is 283 days, but the calculated time may be exceeded by 45 days.

Assuming, then, that the period of gestation in the human female varies from the ordinary term, both by excess and by diminution, it becomes a matter of some interest as well as of practical importance to inquire if any explanation can be given of the phenomenon. It seems to me that, if such explanation is at all possible, it is to be sought in the study of the physiology of pregnancy, and more particularly in the consideration of—1st, the circumstances in which conception takes place; 2nd, of the mode of growth of the fœtus; and 3rd, of the conditions which originate the act of parturition. With regard to the circumstances in which conception takes place, it has been proved that in animals in which sexual intercourse takes place an interval in some cases of days—even months—intervenes between insemination and conception. The spermatozoa, which are now universally acknowledged to be the fecundating elements, traverse the uterine cavity and find their way into the Fallopian tubes by their own independent movements. There, if a mature ovum be present, it is impregnated, and from that moment gestation begins. Bischoff has observed that in the bitch, by the time the ovum has reached the uterus, or even the lower end of the oviduct, the period of heat or desire for sexual congress has passed away, and consequently the opportunity for impregnation is lost. In the guinea-pig, also, the œstrus has passed, coitus has long ceased to be permitted, and even the vulva has again contracted, by the time the ovum has quitted the tube and entered the uterus. Bischoff had also the good fortune to observe a peristaltic action in the walls of the oviduct, by which the contained ova, visible through them, were moved backwards and forwards. The ova appeared to be surrounded by a transparent fluid in which they floated. In connexion with this interesting observation, two circumstances specially noted and proved by Newport may be here mentioned, viz., that in the artificial impregnation of the ova of amphibia, although impregnation commences at the instant of contact of the spermatozoa with the ova, yet a certain duration of contact is essential to its completion; and further, that although an exceedingly minute quantity of spermatozoa suffices to impregnate the ovum, yet impregnation takes place more tardily when the number is extremely limited than when the number is abundant. The alternate backward and forward movements of the ova and semen observed by Bischoff in the oviduct would seem to have for its object the retention of the essential elements of conception in close contact, so as to render impregnation more certain. It is well known that in insects the semen is laid up after sexual union in receptacles in the female, and remains active for months, while in the common domestic fowl one connexion with the male suffices to impregnate twelve or twenty eggs in succession. Marion Sims has also shown that spermatozoa in the human female remain active in the cervical canal of the uterus several days after intercourse, and it is highly probable that they may retain their vitality a much longer period in the uterine cavity, and more especially in the ampulla of the Fallopian tube, where they will be removed from the prejudicial influence of the acid vaginal secretions.

Turning to the condition of the generative organs in women during the period of sexual activity, we find that the uterus, and more especially its mucous membrane, is undergoing a perpetual series of changes, consisting in the alternate process of disintegration and reconstruction of its constituent elements. The process of disintegration is marked by the escape of a certain quantity of blood, and owing to the condition of the sexual organs at this time, it was commonly believed—a belief still entertained by many—that menstruation is analogous to the œstrus in the lower animals, and that, as in the latter, conception is most apt to take place at this period. This idea, however, is quite erroneous, for during œstruation, when there is a discharge from the genitals, which is not always the case, it is mucous in character, and its source is chiefly the glands of the external organs. Its object is to lubricate the parts, and, in some instances, by its odour to attract the male. Besides, it is only at this period that the male is received and impregnation is possible. During menstruation, on the other hand, the mucous membrane of the uterus is in a state of disintegration, and is not fitted to receive the ovum even if impregnated. It is true that menstruation sometimes occurs during pregnancy; but in these cases it is probable the process of disintegration is confined to a portion of the decidua, for if the whole of the latter were thrown off abortion would ensue, an event which is by no means uncommon. It may be stated, then, as a general rule to which the exceptions are comparatively few, that when menstruation occurs it is an indication that just before its appearance the uterus was fitted to receive and retain a fertilized ovum; but at the time of its occurrence the uterus neither contains an impregnated germ nor is capable of retaining and nourishing it. It would appear, therefore, that the uterus is in a more favourable state to receive and retain a fertilized ovum towards the end of a menstrual interval than at the commencement, although the evolution of the germ in the uterus may begin at any time during the absence of menstruation. The process of ovulation occurs at all periods of life before, during, and after the appearance of menstruation, and therefore takes place independently of the latter; and although menstruation is to be regarded as a sign that the uterus is in a condition during the intervals of evolving the fertilized ovum, yet cases are on record where pregnancy has occurred both before the appearance of the menses and after the menopause. As an ovum may arrive at any time in the uterus and may begin to be developed at any period during the catamenial interval, it is impossible in any individual case to tell the duration of the pregnancy, even when it is the result of a single coitus. Now, if with Matthews Duncan we take 278 days as the average period of gestation, reckoning from the last day of the last catamenial discharge, it is obvious that all cases of gestation in which parturition occurs in from 255 to 278 days may have the same real, although not the same apparent duration. As fully 60 per cent. of all pregnancies occur within the 278 days, and about 30 per cent. a few days beyond that period, it may be assumed that in nearly 90 per cent. of all labours the real duration of pregnancy may not exceed 255 or 260 days. Of the comparatively small number of pregnancies which continue beyond the 41st week, they may be accounted for in various ways:—First, by defective insemination. We have seen that Newport, in his observations on the fertilization of the ova of amphibia, noticed that when the spermatozoa were few in number the immediate changes consequent on impregnation took place more slowly, and this circumstance will likely cause the slower evolution of the germ. Second, as suggested by Sir J. Y. Simpson, the ovum of one pregnancy may be cast off without the decidual lining of the uterus being shed, and, the ovum of a succeeding period coming in its place, the duration of pregnancy would seemingly be prolonged. Third, in cases such as the first one which I have described, where there was no opportunity for sexual intercourse after pregnancy, sufficient semen in an active state may have been retained in the ampulla of the Fallopian tube to fertilize an ovum of a succeeding period, to replace the preceding ovum, which may have been thrown off without any objective symptoms. Fourth, whatever may be the efficient cause of labour, there can be no doubt that the nerve centre which regulates the parturient pains is, under certain circumstances, excited with difficulty, as is proved by those cases where, after labour has commenced, the uterine contractions cease, and do not return for weeks. For one or other of these reasons, or by a combination of them, it seems to me that most, if not all, the cases of protracted gestation may be satisfactorily explained. From the fact that parturition frequently coincides with the menstrual period, Lœwenhardt has formulated the proposition that the duration of pregnancy amounts to ten times the length of the interval between the commencements of the two menstrual periods prior to conception. This may be true enough in the average run of cases; but, if relied on always, it would require us to believe that pregnancy may last only 210 days, or as long as 900 days, if, as sometimes happens, the preceding interval amounts to 3 weeks or three months.

ARTICLE III.—*Two Cases of Enucleation of Intra-uterine Fibroids by Dr Matthews Duncan, in St Bartholomew's Hospital.* Communicated by W. LENTON HEATH, M.B., F.R.C.S., late Resident Midwifery Assistant.

CASE I.—E. S., aged 47, was admitted into Martha ward on 15th February 1881.

Her history was briefly as follows:—

She had been married twenty-eight years, and had nine children—the last nine years previously.

For two years she had suffered from menorrhagia (with great pain at the periods), which had been gradually increasing in severity, so that the last two periods had lasted ten or twelve days in the month. A month before admission a profuse flooding came on, and continued severely for a fortnight, completely prostrating the patient, who on admission was much wasted and bore evident signs of having suffered from severe hæmorrhage. Her pulse was feeble, 100 per min.; temperature 100°·2.

On Examination per Hypogastrium, nothing abnormal could be made out.

Per Vaginam.—The uterus was large, and the cervix dilated, and a polypoid mass could be felt reaching nearly to the external os. The sound passed fully three inches into the uterus. Following up this tumour, Dr Duncan found that it extended to the fundus uteri, where it was attached. On seizing it with the volsella, so loose was its texture that no good hold could be had on it, but it came away in fragments in the forceps, and in this manner the whole of it was removed with the exception of some portions of capsule. The fragments together made up a mass the size of a small pear, and microscopic examination showed that it was composed of loose connective and unstriped muscular tissue. After the removal of the tumour had no more pain or hæmorrhage, but gradually gained colour and strength, and was soon discharged well.

CASE II.—M. B., aged 36, admitted 26th February 1881. She had been married eleven years; had five children—the last two years previously. She had suffered much pain over the base of the sacrum ever since the birth of her last child, and this pain was aggravated at her menstrual periods. For three months before admission she had had constantly recurring attacks of hæmorrhage from the uterus, never being free from loss for more than a day or two at a time.

On admission she was extremely weak and anæmic. Pulse 96; temperature 99°.

On Examining per Hypogastrium, there was detected a rounded, mobile tumour, presumably the fundus of the uterus.

Per Vaginam.—The os was enlarged to the size of a shilling, and through it there slightly projected a soft, lobulated tumour, the higher parts of which could not be reached by the examining finger. The sound entered the uterus in the natural direction three inches. Dr Duncan slit up the thin capsule of this tumour, when it easily shelled out, clean and smooth as an egg, from the upper part of the posterior lip of the cervix and the lower part of the body of the uterus, which it involved. The tumour was an ordinary uterine fibroid, about the size of a duck's egg, but the small boss which presented at the os was much softer than the rest of the growth. There was a pretty free loss of blood at the time of the operation, but this soon stopped spontaneously. On the third day after the operation the patient complained of a good deal of pain in the lower abdomen, and her temperature rose to 102°; pulse 106.

The next day the pain still continued, the temperature being then 103°·2.

On the following day the cause of the pain and rise of temperature was found to be an attack of parametritis, which now showed itself as a hard and tender swelling appearing on the right side of the neck of the uterus. The swelling, at first hard, gradually became softer, and at one time it seemed as if an abscess was forming and pointing in the vagina; but eventually the swelling receded and all the signs of parametritis gradually cleared up, and the patient left the hospital cured.

Remarks.—These cases are interesting from the fact that they were in the hospital and under treatment at the same time; that they were good examples of intra-uterine fibroids, and in each the presenting part of the tumour was so soft as to feel like a mucous polypus. It was also interesting to note that in the first case, where the tumour was detached in fragments, and apparently the severer operation, the patient did uninterruptedly well, whilst in the second, where the capsule was merely slit up and the tumour enucleated, the patient had rather a severe attack of parametritis. This may possibly be explained by the fact that the cervix was involved in the latter case, and the body of the uterus in the former, and that parametritis is more likely to ensue after operations involving the cervical portion of the uterus, because of its proximity to connective tissue, and indeed, to the usual seat of this disease.

ARTICLE IV.—*The Action of the Auricles in Health and Disease.* By G. A. GIBSON, M.D., D.Sc., F.R.S.E., Fellow of the Royal College of Physicians of Edinburgh, and Clinical Medicine Tutor, Royal Infirmary.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th April* 1882.)

WRITING about thirty years ago, Stokes[1] says, "Although in most cases of dilatation of the heart we find the auricles as well as the ventricles engaged, yet our knowledge of disease as affecting the former cavities is very limited." During the three decades which have nearly passed away since these lines were penned, our knowledge of the conditions referred to by their author has greatly increased; and it is the intention of the following pages to discuss the action of the auricles from the physiological as well as from the pathological point of view, so as to attain a wide conception of the part which they play in the maintenance of the circulation under varying conditions. In doing so, only such matters of historical interest as are indispensable to the thorough comprehension of the subject will be touched upon.

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[1] Stokes, *The Diseases of the Heart and Aorta*, chap. iii. p. 273, 1854.

When the anterior wall of the thorax is removed from any of the larger mammals, and respiration kept up by artificial means, we are enabled to follow and study the different phases of the cardiac cycle as they occur in succession one to another. Bestowing our attention more particularly upon the auricular systole, the following is the sequence of events which we may observe.

At the end of the diastolic pause rhythmic contraction is seen in the great veins, pulmonic as well as systemic, which open into the cavities at the base of the heart. These vessels are full of blood, and as the contraction passes along them in a peristaltic wave towards the heart the auricles are seen to bulge slightly. When this wave breaks upon the auricles, the auricular sinuses suddenly contract and approach the ventricles, their contraction being immediately followed by that of the appendices, which are drawn inwards. In this way the contraction of the auricles, following that of the great veins, may be regarded, as Beaunis[1] suggests, as the last phase of the auricular systole.

The fact of the rhythmic contraction of the venous system, so important not only for the maintenance of the circulation in health, but, moreover, so valuable in diseased conditions, has for long been almost entirely ignored. In the works of Senac[2] and Haller[3] we find that the physiologists of their time were well acquainted with the action of the venæ cavæ and pulmonales, and that it was a matter of everyday observation that the superior vena cava continued to pulsate after the auricles and ventricles had become motionless. Yet during the closing years of last century and the first half of our own no such property was allowed to the great veins; as a matter of fact, in the ponderous memoir of Raciborski[4] the statements of Haller are categorically denied, and attributed to mistakes in observation.

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[1] Beaunis, *Nouveaux éléments de la physiologie humaine*, tome ii. p. 1003, 1881, 2nd edit.

[2] Senac, *Traité de la structure du cœur, de son action, et de ses maladies*, tome i. livre ii. chap. 3, p. 310, 1749.

[3] Haller, *Elementa Physiologiæ*, tom. i., pp. 399 and 410, 1757.

[4] Raciborski, *Mémoires de l'Académie Royale de Médecine*, tome ix. p. 484, 1841.

The discovery by Wharton Jones[1] of the rhythmic pulsations of the veins of the bat's wing was of much importance, for it turned the attention of physiologists to the well-nigh forgotten fact that the venous walls have the power of independent contractions in situations requiring such aid. Now, by the observations of Colin[2] and of Lauder Brunton and Fayrer,[3] the subject may be regarded as beyond discussion.

During the auricular systole it seems as if two roads were open for the flow of the blood, either backwards into the great veins or forwards into the ventricles. In reality, however, it is not so, as the former path is rendered impassable by several conditions. The peristaltic wave passing down the venous trunks impels, as we have seen, the blood into the auricles, and then, before it has entirely finished the auricular systole, acts also from above downwards upon the blood. Further, the ventricles of the heart in the diastolic phase oppose not the least resistance to the influx of blood; in fact, apart from the diastolic untwist to be afterwards referred to, by their own inherent elasticity, and by the negative pressure caused by the pulmonary tension, they may be regarded as having an aspiratory action. Lastly, if in any way the pressure within the great veins becomes positive,—that is, above that of the atmosphere,—and there is a tendency to backward flow, any such reflux, as pointed out by Hamernjk,[4] at once closes the valves of the jugular and subclavian veins, and so prevents any further regurgitation.

During the auricular systole, therefore, the blood can, under normal conditions, only flow in the one direction, and in this phase the ventricles may be observed to swell, while on feeling them they are found to become harder and firmer.

Under favourable circumstances the auricular systole makes itself heard, seen, and felt on the surface of the body. In a case of presternal fissure studied and described by Malet and myself,[5] the contraction of the auricle was accompanied by a low breezy murmur immediately preceding the first sound. And what we thus observe when the heart is in its normal condition may, in other states, become greatly exaggerated. When there is any impediment to the passage of the blood from the auricle into the ventricle, as from stenosis of the orifice or from its partial occlusion by tumour, the former cavity gives very definite evidence of its systole in the rough murmur preceding the first sound.

As a rule, the unaided senses of sight and touch are unable to appreciate the limited range of movement caused by the contraction of the auricular walls at the surface of the thorax, but all good tracings taken with the cardiograph show an elevation of the lever just before the ventricular systole. In this way we may measure the duration of the auricular systole. The case of cleft sternum referred to above allowed me to make some observations upon the relative length of each phase of the cardiac cycle, and I should like to mention very briefly the duration of the contraction of the auricles, which has been fully discussed elsewhere.[1] The subjoined woodcut is a copy of the tracing representing an entire revolution, with the time-register beneath it. This, in the original, is the curve made by a tuning-fork vibrating 100 times in a second. For the sake of simplicity, each complete excursion has been replaced in the woodcut by a verticle line. The wave between the dotted lines A and B is caused by the auricular systole, and it extends, as will be seen in the woodcut, over ten-hundredths of a second. This was the minimum duration of the auricular contraction in our case, and the limits between which it varied were ·10 and ·13 sec. In different revolutions it constituted from 8·8 to 13·7 per cent. of the whole cycle. As might be expected, its duration was much more variable than that of the ventricular systole,

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[1] Wharton Jones, *Philosophical Transactions*, Part I. for 1852, p. 131.

[2] Colin, *Comptes Rendus*, tome lv. p. 494, 1862.

[3] Lauder Brunton and Fayrer, *Proceedings of the Royal Society of London*, vol. xxv. p. 174, 1876.

[4] Hamernjk, *Physiologisch-pathologische Untersuchungen über die Erscheinungen an den Arterien und Venen*, u.s.w., S. 239 u.f., 1847.

[5] Gibson and Malet, *Journal of Anatomy and Physiology*, vol. xiv. p. 4, 1879.

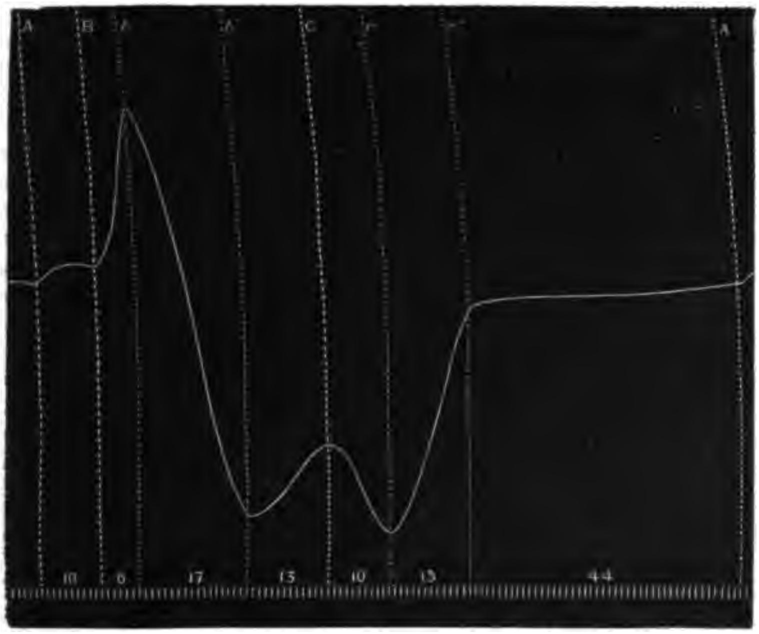

Fig. 1.

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[1] Gibson, *The Journal of Anatomy and Physiology*, vol. xiv. p. 237–8, 1880.

but it was more stable than that of the phase of ventricular diastole.

This subject would not be complete without a few words with reference to the intra-auricular pressure. Marey[1] found that the pressure in the right auricle was negative during almost the entire cycle; this negative pressure varying between 2 and 33 mm. of mercury, but usually lying between 7 and 15 mm. The pressure only became positive during the systole of the auricle itself, and the maximum which it attained was 2·5 mm. of mercury. Fick,[2] using his spring manometer, came to the conclusion that the pressure within the auricles only became positive during the ventricular systole. This, on the face of it, is absurd, and has been abundantly disproved by the experiments of most competent observers.[3]

When the ventricular systole follows the auricular there is but little if any stasis. Not only do the great veins and auricles relax and dilate under the pulmonary negative pressure, and so accommodate themselves to the blood returning from the periphery, but greatest significance, showing that just at the instant when they require it most the auricles receive help in performing their functions. the action of the ventricles also aids this return of venous blood. Pettigrew[4] developed the theory that during the systole of the ventricles the papillary muscles draw down the curtains of the auriculo-ventricular valves, and thus, by relieving the auricles, make way for the returning blood without any hindrance. Küss has conceived such admiration for this theory of Pettigrew's as to lead him to appropriate it as his own; he quotes it without the least acknowledgment,[5] and is commonly regarded, not only on the Continent, but also in Britain, as its author. It is a fact of the

These views receive valuable proof from the investigations of François Franck.[6] His researches on the normal pulsation of the jugular veins entirely confirm the previous deductions of Potain,[7] and thus add the support obtained by experiment to the theories which had formerly been founded upon clinical observation. Much light has been thrown upon the action of the auricles by this recent work.

The accompanying figure, which is given by François Franck and reproduced here by his kind permission, shows tracings taken simultaneously from the jugular vein and the ventricle.

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[1] Marey, *Physiologie médicale de la circulation du Sang*, pp. 100 and 103, 1863.

[2] Fick, quoted by Foster, *A Text-Book of Physiology*, pp. 119, 120, 2nd edit., 1878.

[3] Goltz and Gaule, *Archiv für die gesammte Physiologie des Menschen und der Thiere*, xvii. Band, S. 100 u.f., 1878.

[4] Pettigrew, *Transactions of the Royal Society of Edinburgh*, vol. xxiii. pp. 796–7 and 800, 1864.

[5] Küss, translated by Amory, *A Course of Lectures on Physiology*, p. 135, 1876.

[6] François Franck, *Comptes rendus hebdomadaires des Séances de la Société de Biologie*, Séances du 2 juillet 1881, du 28 janvier, et du 4 février 1882.

[7] Potain, *Mémoires de la Société médicale des Hôpitaux*, 1868. Communication du 24 mai 1867.

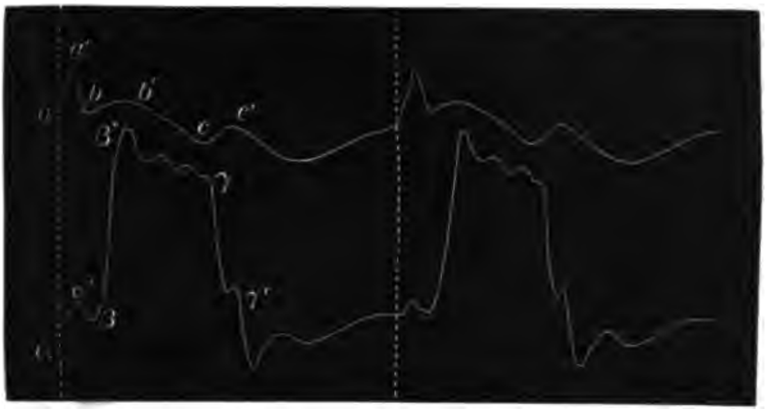

FIG. 2.

The upper or venous tracing shows a sharp elevation beginning at *a*, which is caused by the auricular systole as shown in the cardiac tracing below at *a*. It is succeeded by a depression from the point *a'* which corresponds with the cessation of auricular contraction at *a'*. The sinking of the curve is interrupted by a slight elevation, commencing at *b*, which exactly coincides with the ventricular systole *β*, and which is caused by the shock of the onset of the systole. This insignificant rise is followed by a return of the downward movement from *b'*, which lasts until the termination of the ventricular systole. During this period the auricles are gradually relaxing before the influx of venous blood, and it is their continued diastole which causes what is practically one movement of depression from *a'* to *c*. That this sinking of the jugular veins is caused by the auricular diastole has been incontestably proved by François Franck. He has demonstrated that the tracing presents the same character after artificial closure of the auriculo-ventricular orifice; that when the auricle is reduced to a state of inaction the venous pulse ceases in spite of the continued movements of the ventricle; and that the cessation of ventricular activity has no influence over the depression of the venous tracing, which is manifested so long as the auricle is in action. No doubt, in the unopened thorax the aspiratory influence of the lessened bulk of the heart during the ventricular systole must aid in this depression of the venous curve; but it is thus proved by the facts enumerated above to be mainly caused by the auricular diastole.

At *c* the descent of the tracing is again interrupted by a little elevation corresponding with the termination of the ventricular systole at *γ*. This elevation is due, in greatpart, at least, to the stoppage of the aspiration exerted by the lessening ventricle, and in turn it gives place to another descent beginning at c', a point coinciding with the shock on the sigmoid valves, γ'. It is due to the aspiration caused directly by the relaxation of the ventricle. Whether there be such an active aspiratory force during the diastolic untwisting of the muscular walls, drawing the blood from the auricle and venous trunks into the ventricle, is a point which has been much discussed, but by the researches of Goltz and Gaule[1] it has been positively established. Their investigations, which have been repeated by François Franck, prove that such a force is manifested by the diastole of the ventricle *after the heart has been removed from the thorax.*

The venous curve after this last fall gradually rises as the venous trunks become full.

In health and under normal conditions, therefore, the only hindrance to the return of blood occurs during the contraction of the auricles, when the venous curve shows a sharp ascent.

Comparative anatomy teaches us that those mammals which spend a certain proportion of their lives beneath the surface of the water are endowed with the capacity of great distensibility of the venous channels leading to the right ventricle. Those cavities act as reservoirs until, on the return of respiration, the pent-up blood again obtains admission to the vessels of the lungs. In mammals such as man, which do not in this way suspend the respiratory process, there is nevertheless provision for more or less complete arrest of the pulmonary circulation. When the passage of blood through the lungs is hindered either by the operation of natural causes or by disease, and when the pressure in the pulmonary artery tends in consequence to rise, the lungs are relieved by the "safety-valve action" of the tricuspid apparatus, established by the observations of Hunter,[2] Adams,[3] and King.[4] When the heart is tested after death, the pulmonary and tricuspid valves are never, strictly speaking, competent, and I have elsewhere tried[5] to attain an approximate estimation of the pressure required to cause escape from these valves in man and certain domestic animals.

François Franck has shown[6] from the result of experiment that stoppage of the respiration for a brief space of time causes regurgitation into the systemic veins, with a total change in the character of the venous tracing. This may be best shown by inserting here, by his kindness, one of his published tracings. In

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[1] Goltz and Gaule, *Archiv für die gesammte Physiologie des Menschen und der Thiere*, xvii. Band, S. 110, 111, u. 116, 1878.

[2] Hunter, *A Treatise on the Blood, etc.*, Part I. chap. ii. p. 162, 1794.

[3] Adams, *Dublin Hospital Reports*, vol. iv. p. 437 *et seq.*, 1827.

[4] King, *Guy's Hospital Reports*, vol. ii. p. 125 *et seq.*, 1837.

[5] Gibson, *Edinburgh Medical Journal*, vol. xxv. p. 979, 1880.

[6] François Franck, *op. cit.*, Séance du 17 juillet 1881.

Fig. 3 the upper tracing represents the movements of the jugular vein, and the lower gives the pulsations of the right ventricle, registered simultaneously with those of the vein. The part marked A was taken while the artificial respiration was maintained with regularity, and the other portion, B, after the respiration had been suspended for two and a half minutes. In the first part—*i.e.*, during the regular continuance of artificial respiration—it will be seen that the tracing given by the vein is characterized by an abrupt descent at *a*, a point which coincides exactly with the commencement of the ventricular systole in the curve below at *a*. This descent is, as above described, to be ascribed to the diastole of the auricle. In the second portion of the tracing, B, on the other hand, the ventricular systole *a′* causes a considerable elevation of the venous curve at *a′*, in consequence of regurgitation from the ventricle into the auricle and venous trunks. Thus again the result of experiment entirely confirms the theories drawn from clinical facts.

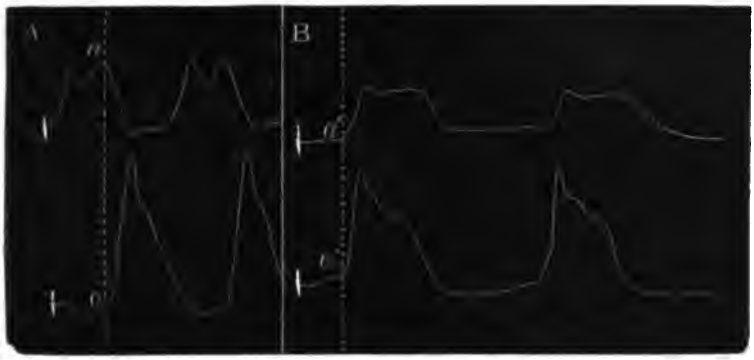

Fig. 3.

When the obstacle to the passage of the blood through the pulmonary vessels is persistent, the regurgitation becomes permanently established, and the abnormal venous pulse—*i.e.*, that of the latter part of the tracing—is fairly set up. It constitutes a symptom of great value as indicating the condition of the right side of the heart.

François Franck has lately discussed[1] the mechanism of tricuspid incompetence, and has shown that permanent regurgitation is dependent upon dilatation of the fibrous ring around the auriculo-ventricular orifice, while the temporary form of incompetence is due to abnormal distention of the ventricle, the walls of which, in consequence, drag the *chordæ tendineæ* downwards and prevent closure of the valvular curtains.

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[1] François Franck, *op. cit.*, Séances du 17 juillet 1881 et du 11 février 1882.

Before entering upon a brief consideration of the venous pulse as a symptom of the state of the heart, it may be remarked in passing that the right auricle sometimes gives direct evidence of its condition. Thus Stokes[1] narrates a case in which a pulsating tumour existed to the right of the sternum; this, after death, was found to be the right auricle, which "presented a most singular appearance when the chest was opened, resembling a vast purple tumour which concealed the whole of the anterior portion of the right lung."

The so-called "venous pulse" or "arteriosity of veins,"[2] more especially in the neck, gives the most important indication as to the condition of the right auricle. Morgagni[3] pointed out that the venous reflux consisted of two waves, the former of which he attributed to the auricular and the latter to the ventricular systole. In this state knowledge remained until the introduction of the graphic method.

Bamberger[4] published the earliest sphygmographic tracings of the jugular movements; these tracings showed a saddle-shaped curve. He thought that the first shoulder was caused by the systole of the ventricle, while the second was due to the contraction of the *musculi papillares*, and in this interpretation he must be regarded as taking a retrograde step.

Geigel[5] immediately afterwards described a presystolic, a primary, and a secondary systolic elevation of the curve. The first-named of these he considered as arising from a stowage-wave, and the second and third respectively as of auricular and ventricular origin. In the same year Marey,[6] in his classic work, figured and described a venous tracing with two waves—auricular and ventricular. In a subsequent communication Giegel[7] stated that his further observations lent no support to his former conclusions, and that the first wave appeared to be caused by the contraction of the right auricle, while the second and third were ventricular.

The most careful and philosophical descriptions of the form of the waves in jugular reflux are given by Friedreich.[8] The accompanying tracings are taken from his paper. The one shows three waves, *a*, *b*, and *c*; the other only two, *b* and *c*. Bestowing our attention mainly upon the first wave, *a*, which is caused by the systole of the right auricle, we find in it an index of the state of the auricular muscle. So long as it is shown in tracings from the jugular, the auricle is comparatively healthy; when it disappears it is a certain proof of paralysis of the auricle, and if it should reappear it gives evidence of a return of contractile power. In this way the auricular wave in the jugular veins is of very considerable practical interest. The large wave, *b*, is caused by the systole of the ventricle, and the third wave, *c*, is reflected from the interior of the heart, in the same way as the dicrotic wave in the radial tracings of aortic regurgitation first shown by Naumann.[1]

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[1] Stokes, *op. cit.*, p. 274.

[2] Testa, *Delle Malattie del Cuore, Coro Cagione, Specie, Segni e Cura*, tomo iii. capo xvii. § 3, 1810–11.

[3] Morgagni, *De Sedibus et Causis Morborum*, Lib. II. Epist. Anat. xviii. art. 10, 1761.

[4] Bamberger, *Würzburger medicinische Zeitschrift*, iv. Band. S. 232, 1863.

[5] Geigel, *Würzburger medicinische Zeitschrift*, iv Band, S. 332, 1863.

[6] Marey, *Physiologie médicale de la circulation du Sang*, p. 532, 1863.

[7] Giegel, *op. cit.*, vi. Band, S. 249, 1865.

[8] Friedreich, *Deutsches Archiv für Klinische Medicin*, i. Band, S. 241, 1866.

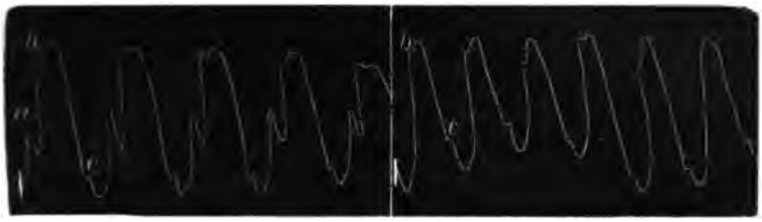

Fig. 4.

The left auricle cannot in the same way give evidence of its condition; and, moreover, being deeply buried behind the ventricles and great vessels, changes of size are almost beyond the possibility of detection. But fortunately the left auricular appendix, lying against the outer side of the pulmonary artery in the second left intercostal space, affords the means not infrequently of determining the state of the auricle with great nicety. It is to this part of the subject that attention is particularly requested, and the earlier part of the paper may be regarded as leading up to it.

In cases of disease of the mitral orifice, a systolic murmur may sometimes be heard at the base of the heart, and in this situation it is often distinctly louder than in the mitral area. Naunyn[2] has shown that this basic murmur of mitral disease has its point of maximum intensity quite outside of the pulmonary area, and about an inch and a half from the left edge of the sternum, in the second left intercostal space. This fact is sufficient to disprove Skoda's[3] theory, which need not be mentioned here; and Naunyn has explained the causation of the murmur by ascribing it to the regurgitation at the mitral orifice, the sound vibrations being carried along with the current of blood into the left auricle.

In spanæmia and allied conditions, including febrile diseases, there is also a systolic murmur, most clearly audible over the base of the heart. This murmur has been in turn attributed to the aortic, to the pulmonary, and even to the tricuspid orifice. But in more recent times Balfour[1] has extended Naunyn's explanation of the basic murmur of mitral disease to the similar murmur of spanæmia, which is, with the exception of the accentuated second sound in the pulmonary area, the earliest sign of cardiac affection in this malady, and which is speedily followed by the development of a systolic murmur at the apex.

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[1] Naumann, *Zeitschrift für rationelle Medizin*, xviii. Band, 215 S., 1863.

[2] Naunyn, *Berliner Klinische Wochenschrift*, 1868, 189 S.

[3] Skoda, *A Treatise on Auscultation and Percussion*, translated by W. O. Markham, M.D., p. 246, 1853.

I do not in this paper feel called upon to follow the reasoning lucidly given in the writings above referred to in support of Balfour's view, but I may be allowed to make one or two remarks on the subject. The causation of the murmur in mitral disease is quite clear; there is an admittedly patent orifice through which a stream of blood is driven into the left auricle with the whole force of the left ventricle. It must be observed that such cases of mitral disease as are accompanied by a murmur in the position above indicated—a position which might be termed the "auricular area"—are almost invariably pale and spanæmic, with flabby muscles; they therefore agree, in so far as the condition of the muscular system is concerned, with cases of spanæmia and fever.

From the nature of spanæmia and allied diseases, the opportunity of confirming the diagnosis after death is fortunately of extreme rarity. In patients who have died of febrile disorders, however, post-mortem examination shows that the heart shares in the general state of the muscles, and the left auricle is found to be considerably dilated, as well as the other chambers of the heart. In mitral disease it is not uncommon to meet with a very much dilated left auricle after death.

The only other part of the circulatory apparatus, besides the left auricle, which could be supposed capable of causing the basic murmur is the pulmonary artery. But we have sufficient proof absolutely to disprove such a view. It is well known that in many cases the basic murmur in the "auricular area" is accompanied by a distinct pulsation, which has its point of maximum amplitude about an inch and a half from the left edge of the sternum. Apart from the inherent improbability that the pulmonary artery should be displaced so far during the development of spanæmia, and afterwards return to its original position, we have in the graphic method a means of reaching a solution of the question. It has been my privilege to contribute some cardiographic observations[2] to the subject, and before concluding this paper I wish briefly to allude to them. In order to do so, two of the tracings are reproduced here. The single tracing gives the character of the pulsation. It is evident at a glance that it is not arterial, and therefore it is not such a tracing as could be obtained from the pulmonary artery. Nor, further, is it such a tracing as the *conus arteriosus* gives. The first tracing figured in this paper (page 121), which gives the form of curve obtained from the *conus arteriosus* in a case of cleft sternum, is totally different from the one immediately preceding in its character. Therefore the pulsation in the second left intercostal space can hardly be caused by any part save the auricle. And that the pulsation is not due to the contraction of the auricle itself is proved by the following figure (taken from the same case as that just preceding), which gives the tracing from the apex beat simultaneously with that of the pulsation in the second left intercostal space, which is above it in the figure. In it the wave of pulsation in the upper tracing is seen to *follow*, not to *precede*, the systolic wave of the lower or apex tracing. These facts seem to prove decisively that the auricle is the part of the heart which causes the pulsation, and that it does so in consequence of systolic regurgitation into it from the ventricle.

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[1] Balfour, *Clinical Lectures on Diseases of the Heart and Aorta*, p. 161, 1st ed., 1876, p. 172; 2nd ed., 1882; and *Lancet*, vol. ii. for 1877, p. 383.

[2] Gibson, *The Lancet*, vol. ii. for 1877, p. 418; *Edinburgh Medical Journal*, vol. xxiii. p. 299 and p. 1012, 1877-78.

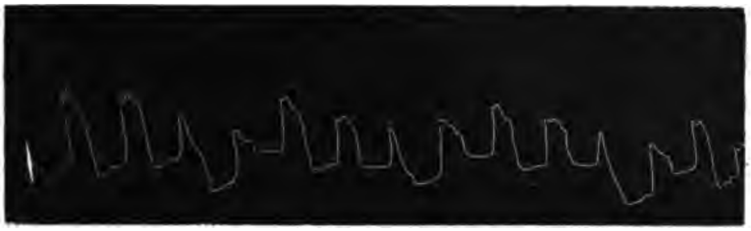

FIG. 5.

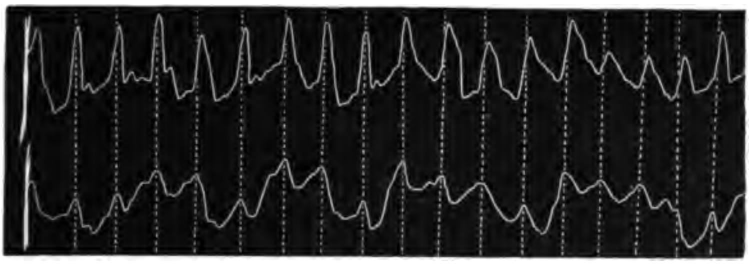

FIG. 6.

It is sometimes of use to pass in review a series of facts which have been discovered, and so to attain a conception how our knowledge stands. Such has been the aim of this paper. There is still much misapprehension regarding the auricles of the heart and their action, more especially with reference to the facts dealt with in the latter part of the paper. If it should lead anyone to bring forward new facts either to prove or to disprove any of the theories supported in it, the object of the paper will have been fully gained.

ARTICLE V.—*The Murmurs of Debility in the Pulmonary and Tricuspid Areas.* By WILLIAM RUSSELL, M.B., Honorary Physician to the Carlisle Dispensary, formerly Resident Physician and Pathologist, General Hospital, Wolverhampton.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th April* 1882.)

OF the various theories advanced in explanation of the systolic murmur frequently present in the pulmonary area as a concomitant of debility, none has, perhaps, aroused more interest than the application by Dr G. W. Balfour of Edinburgh, to the solution of the difficulty, of Naunyn's theory that in organic mitral incompetence the systolic murmur heard in this region is a mitral regurgitant one, carried by the regurgitant stream into the dilated appendix of the left auricle, and audible here from the proximity of the appendix to the thoracic wall. In support of this view, it is maintained that the murmur attains its maximum intensity some distance to the left of the sternal edge, and that this point coincides with the position of the appendix; and, further, that the dilatation is occasionally, if not frequently, evidenced by an auricular pulse.

This murmur, sometimes alone, but frequently associated with a systolic bruit in other cardiac areas, is heard in a large proportion of all cases of debility, whether due to chlorosis, to the various fevers, or to parturition. It will not be seriously denied here that in these affections there is relative insufficiency of the mitral valve, the result of a debilitated and relaxed condition of the cardiac muscle, including the musculi papillares. This insufficiency, however, is not always evidenced by a bruit at the apex, the point at which mitral bruits are ordinarily audible; but regurgitation is assumed from the accentuation of the pulmonary second sound, and from the presence of a systolic murmur in the pulmonary area. So far the facts may be accepted as indisputable, and the inference of mitral regurgitation granted, I think, without hesitation; but, with the utmost respect for the opinions of the distinguished advocates of the auricular theory, I venture to question the explanation offered by them as to the place of production of the murmur.

It is necessary to the acceptance of the auricular theory that the murmur in question be present in organic incompetence of the mitral valve, whether associated with stenosis or not. Rosenstein,[1] Guttman,[2] and Balfour[3] hold that it is present in such conditions. Rosenstein confines the murmur to the second space; while Balfour speaks of the "auricular area" as "above the fourth rib, to the left of the sternum,"[4] and ascribes the pulsation in this region, both in mitral regurgitation and mitral stenosis, to the auricle.

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[1] Ziemssen's *Cyclopædia of the Practice of Medicine*, vol. vi. p. 121 *et seq.*

[2] *A Handbook of Physical Diagnosis*, p. 289, New Sydenham Society's translation.

[3] *Diseases of the Heart*, p. 152, 1st edition.

[4] *Op. cit.*, p. 152.

The centre of interest in investigating this subject lies in the appendix of the auricle; for the idea of the murmur being conveyed direct from the body of the auricle, notwithstanding its depth in the chest, and that the pulmonary artery interposes between it and the parietes, is not likely to be received with credence. In the first place, there are, I believe, anatomical and other considerations which weigh against the appendix of the auricle being the site of the pulsation and murmur in question. The origin or root of the appendix is overlapped in part by the pulmonary artery, so to reach the parietes the appendix has to traverse a course equal to the diameter of that vessel. Any increase in the diameter of the artery, from increase of its contents will thus place the appendix deeper in the chest; and the distance it has to travel towards its assumed destination is further increased by dilatation of the auricle carrying its root upwards. During dilatation of the appendix its movement is mainly a downward one, following the base of the ventricle as it contracts during systole. Doubtless there must also be, as Sibson[1] points out, a certain amount of forward movement, but this can only be inconsiderable; and when Rosenstein[2] speaks of the left auricular appendix lying on the anterior wall of the pulmonary ostium, he surely wanders, for the moment at least, into the realms of fancy. It is further recognised that, in debility, owing to dilatation of the right ventricle, the left is displaced outwards and backwards; or a change occurs which may be regarded as a rotatory movement of the heart round its longitudinal axis; and this must be conceded as having a displacing effect on the auricle analogous to what it has on the ventricle of the same side. While holding that the normal position of the appendix is considerably distant from the thoracic wall, I deduce from the reasons stated above that the distance is increased in conditions of debility. That being the case, pathological anatomy has yet to show us to what extent the appendix shares, even in cases of organic disease, in the dilatation of its companion auricle, and in which of its diameters the dilatation occurs. My own observations lead me to believe that when it is enlarged the enlargement is more transversely than longitudinally, and I have never seen it so enlarged as to warrant the belief that it is the cause of the extensive pulsation claimed for it by Dr Balfour in the second and third spaces. In this connexion I may remind you that it is a frequently noted fact in mitral stenosis, where the conditions are peculiarly adapted to produce dilatation, not only that no such effect is necessarily obtained, but, in addition, that the appendix is frequently the seat of a thrombosis filling its cavity, showing conclusively that its physical conditions are such as allow its contained blood to form what can be little else than a sluggish eddy. And I venture to ask if it be not a pure assumption that, under such circumstances, and considering that the appendix only forms a side-chamber to the auricle, sound should be so readily and so invariably propagated into it as is assumed.

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[1] Reynolds's *System of Medicine*, vol. iv. p. 67.

[2] Ziemssen's *Cyclopædia of the Practice of Medicine*, vol. vi. p. 58.

I shall now state what I believe to be the sequence of cardiac phenomena in cases of debility, and what I venture to suggest as their explanation.

The first indication given of valvular failure at the left *ostium venosum* is accentuation of the pulmonary second sound; this accentuation increases, and is soon preceded by a systolic murmur in the second left space. The murmur, while distinctly blowing in character, contains, at the same time, a rougher or harsher element, and is frequently not the purely soft, blowing sound heard at the apex in occasional cases. A further peculiarity of the murmur is, that during inspiration it gradually disappears—first losing its harsher element, then, towards the completion of inspiration, wholly vanishing. This is one stage, and no further change may occur save towards recovery. If recovery should not begin here, the murmur increases in intensity, and a systolic bruit, varying considerably in tone in different cases, appears in the third and fourth left spaces, between the costal cartilages, and, simultaneously with this, a marked undulation, or even regurgitation, in the veins of the neck. Should the constitutional condition continue or become aggravated, pulsation becomes very marked, if it be not already so, in the second, third, and fourth spaces, the pulsation extending further out the lower the interspace, but not reaching the nipple line unless the apex pulsation be present, when the two coalesce. This is an outline picture of what occurs, and it can sometimes be followed step by step in such a gradually debilitating affection as hæmaturia following slight attacks of scarlet fever, and some of the more prominent stages of which were well shown in the following case:—

CASE I.—A lad aged 17, who died of hæmorrhagic purpura. There was pulsation in the second, third, and fourth interspaces. Over the site of pulsation in the fourth space the first sound was metallic, with a slight impurity; at the apex the first sound was faint and impure, the impurity being heard towards the axilla. There was a well-marked systolic bruit in the second left space, lost half an inch from the sternum, not audible on the adjoining part of the sternum or in the third space, and only heard during expiration, completely disappearing with full inspiration. The pulmonary second sound was much accentuated; the veins in the neck were not distended. These notes were taken on the 7th or 8th of the month of admission. On the 12th, when the patient had become decidedly worse, there was no bruit or impurity audible over the apex or towards the axilla. There was a systolic bruit in the second, third, and fourth interspaces, which was markedly loudest in the second space, where it was rasping in character. The jugulars were prominently pulsating. Notwithstanding the utmost pressure, we were forbidden to make a post-mortem examination of this case.

I shall hereafter refer to the murmur in the second space as pulmonary, and in the third and fourth spaces as tricuspid.

In some cases, I believe, both bruits appear almost simultaneously. In chlorosis one or both may be present, according to the stage at which the case comes under observation, and according to the state of cardiac debility. If the two murmurs be contemporaneously present the tricuspid may be the louder, and in some interesting observations on this point made by Dr Money[1] on parturient women, and communicated to the Royal Medical and Chirurgical Society, he found that out of 42 cases with murmur over the right heart 36 were loudest in the tricuspid area, this area being considered the fourth left space a little to the left of the sternum. In the more fully developed stages the murmur in the second space does not wholly disappear with forced inspiration; but this, in cases of extreme debility, may either be due to diminution in the muscular power necessary to the act, or be accepted as evidence that the murmur has no longer its seat in the pulmonary artery.

The following case, of which I have not preserved as extensive clinical notes as of Case I., proves, I think, positively that neither the auricle nor its appendix was the seat of the murmur and pulsation in the second left space, and this under conditions which must be acknowledged as typical:—

CASE II.—A man aged 30, who was the victim of pernicious anæmia. The apex of the heart beat in the fifth interspace, half an inch outside the nipple line. Over the apex there was a faint, blowing murmur, the intensity of which increased towards the sternum, and attained its maximum in the second and third spaces, half an inch from the sternal edge, and here the murmur was grating, although not loudly so, in character; the murmur faded during deep inspiration. In the second space dulness extended outwards over an inch. I am indebted to the courtesy of Dr Mortimer, the present house physician to the Wolverhampton Hospital, for a copy of the post-mortem notes recorded by me in the Hospital register with reference to this case. The origin of the pulmonary artery was under the second rib. In the second left space the right ventricle extended for fully two inches to the left of the sternal edge. The left auricular appendix was not visible, and was found to lie deeply, the heart having to be turned upwards to bring it into view. There was a "milk-spot" on the right ventricle opposite the third rib and fourth space.

CASE III.—A boy aged 7 years and 9 months, who died of purpura hæmorrhagica. While this case does not afford the same positive evidence as the preceding, it is yet of sufficient interest to be recorded here. On admission the pulmonary second sound was accentuated, but there was no bruit audible over the cardiac region. Ten days after admission, when the patient had become much worse, there was a systolic murmur in the second, third, and fourth left spaces, loudest in the second, about half an inch from the edge of the sternum; while over the sternum adjoining the fourth space it was somewhat coarsely rubbing in character. At the autopsy it was found that the origin of the pulmonary artery was under the second rib, while the adjoining part of the right ventricle extended slightly outwards in the second space. The appendix of the auricle was not unduly prominent and did not appear enlarged.

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[1] *British Medical Journal*, 1882, vol. i. p. 306.

The murmur in the second left space is, I believe, produced in the pulmonary artery, save in the more advanced cases to which I shall refer hereafter. Its mode of production may be explained by a consideration of the relative tensions in the artery and in the left auricle, and in their anatomical relations to each other. Owing to the tension in the pulmonary vessels, the fulness of the auricle must at all times be increased; in fact, the blood coming from the lungs pours into it as rapidly as it empties itself into the ventricle, the result being that its cavity, although enlarged by sharing in the debilitating influences in existence, is already full before the ventricular systole not only prevents further relief to the tension in the pulmonary circuit, but throws back upon it (the auricle) the blood embraced by the segments of the mitral valve as they swing to close the auriculo-ventricular orifice, as well as the column of regurgitant blood from the ventricle. During the filling of the auricle it, according to Sibson,[1] enlarges upwards, forwards, and downwards. The pulmonary artery, subjected to the same tension as the system of which it forms part, has its diameter enlarged, and approaches the chest wall anteriorly and the auricle posteriorly. Now, what I assume to be the result in these circumstances is, that the dilated auricle presses upon the posterior aspect of the pulmonary artery, producing thereby a relative constriction of its lumen sufficient to create the fluid veins necessary for the production of a murmur. The anatomical relations of the parts warrant this explanation; and, if my view of what takes place be correct, it will not be doubted that it is sufficient to cause the murmur. According to this theory the distended auricle aids in pushing the pulmonary artery towards the chest wall; and in the degree to which this is done may, I think, be found the explanation both of the amount of pulsation produced by the artery in the interspace, and of the variety in tone assumed by the murmur, from the loud rasping (Quincke's explanation of which is accepted by Balfour) to the slight forms where it is a mere scratching. The harsh element in the murmur is attributed by Sibson and others to the seat of the murmur being superficial. It may, however, be accounted for in two other ways, namely, that it is a rubbing sound caused by the impingement during systole against the parietes of the point of junction of the artery and conus arteriosus; or that it is the result of the obstructive origin of the murmur, coupled with the condition of the blood. The former explanation is, I think, the more satisfactory, and is strengthened by the fact that the tricuspid murmur frequently presents the same peculiarity. While in the more aggravated cases, occasionally seen, the harshness of the murmur can be accounted for by an increase in the degree of constriction, from a greater dilatation of the auricle more markedly interfering with the lumen of the artery. And this would also explain the stenotic character at times displayed by the murmur.

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[1] Reynolds's *System of Medicine*, vol. iv. p. 95.

The clinical evidence adducible in support of the explanation I offer, both of the mode of production of the murmur and likewise of its tone, is that during inspiration the rubbing element in the murmur is the first to disappear, while with deep inspiration the murmur, save in the more aggravated cases, vanishes altogether. The murmur is frequently so loud that the interposition of a more or less thin edge of inflated lung would not so completely obstruct its conduction as must be assumed it does if the auricular theory be accepted; whereas, with the explanation I suggest, its disappearance is accounted for by the elevation of the thorax during inspiration giving the resilient artery more room, whereby it is enabled to free itself from the pressure of the auricle behind it, and thus to regain its legitimate lumen.

I shall now briefly consider the murmur in the third and fourth spaces. The pulsation in these two spaces is over the part of the right ventricle, which on dilatation is the first to manifest its dilatation by pulsation. In addition I have frequently observed the murmur in the spaces mentioned develop after the pulmonary one had been some time in existence, and concomitantly with the appearance of undulation or pulsation in the jugulars and a lessening of intensity in the pulmonary second sound. I therefore see no reason why it should not be accepted as a tricuspid regurgitant one. The only other feasible explanation is, that it is the pulmonary murmur conducted downwards; but the evidence against that is, that on the appearance of the tricuspid murmur the pulmonary one frequently lessens in intensity, the intensity being necessarily affected by the diminished force with which the blood is propelled into the vessel. And I have already referred to recent observations showing that the tricuspid murmur is the louder in the great majority of cases of a certain class.

While I thus believe the murmur in the second left space to be produced, in the earlier stages of debility, in the pulmonary artery, and that in the third and fourth spaces to have its origin at the tricuspid orifice, Case II. showed that the murmur in the second space was heard, not in the pulmonary artery, but over the upper part of the conus arteriosus, and that therefore the murmur in this space is, in cases of great dilatation, really the tricuspid one, heard here in addition to the third and fourth spaces. That the pulsation in the second space, in cases of organic mitral disease, is due to the dilated right ventricle, I have frequently satisfied myself by post-mortem examination.

In aggravated cases of debility, and in cases with organic disease of the mitral orifice leading to dilatation of the right ventricle, it will, I think, be found that the pulmonary artery is relieved from the pressure to which it would otherwise be subjected, and which might seriously interfere with the passage of the blood to the lungs, by what is practically a rotatory movement of the heart to the left, whereby the left auricle is placed deeper in the chest and to the right of its normal position, while the origin of the pulmonary artery is carried upwards and to the left. By this movement the artery obtains a less rigid barrier along its anterior aspect, and secures an unobstructed course by being removed from the line of direct pressure between the auricle and the thoracic wall.

The foregoing may be briefly summarized as follows:—*Firstly*, Case II. proves that the pulsation and bruit in the second left space, and that in a case of debility, was not due to the left auricle or its appendix: that, on the contrary, the pulsation was due to the conus arteriosus, and the bruit presumably tricuspid in origin. This is the usual condition in advanced debility and in organic disease of the mitral orifice. *Secondly*, That in less advanced cases the murmur is produced in the pulmonary artery by the pressure of a distended auricle. *Thirdly*, That the murmur in the third and fourth spaces, and not infrequently in the second, is a tricuspid regurgitant one. *Fourthly*, As the cardiac changes progress the pulmonary bruit disappears, owing to the altered relations between the various parts of the heart and the thoracic wall, and has its place occupied by the tricuspid bruit.

ARTICLE VI.—*Cases of Stricture of the Urethra.* By FRANCIS CADELL, F.R.C.S.E.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th July* 1882.)

I HAVE collected the following cases more on account of the importance of conserving our experience in the treatment of this important and painful disease, than from an ability on my part to lay any new facts in regard to treatment before the profession:—

CASE I.—C., a gentleman in business, unmarried, of strumous constitution, and rather a free liver, consulted me in January 1880. Had suffered from gonorrhœa several times, and during one of these attacks, six years ago, had retention, which required the use of the catheter. Since then his stream had gradually decreased in size, until at the period of this report great straining was necessary during micturition. A No. 1 elastic bougie was passed, but by the process of interrupted dilatation no larger instrument than No. 3 could be got through the stricture, which was situated in the region of the bulb. I then tried continuous dilatation by tying in catheters, and in a few days No. 6 was reached. At this stage the treatment was stopped on account of extreme irritability of the urethra, with considerable purulent discharge and slight cystitis. It was now decided, as dilatation had failed, to rupture the stricture with Holt's dilator. The patient was prepared for the operation by enjoining careful abstention from alcohol, with a week's course of farinaceous diet. On 9th February 1880 chloroform was administered, and the stricture forcibly ruptured by Holt's dilator. Minims 25 of morphia with 12 grs. of quinine was administered after the effects of the chloroform had passed away. The hæmorrhage was slight. Urine was twice drawn off with a No. 11 catheter on the day of the operation. After that the patient passed water naturally, with very little pain, and in a good stream. Since the operation I have passed a No. 11 bougie without difficulty, at intervals of three months, and there is no evidence of recontraction. In this case interrupted dilatation failed; and I believe when that method of treatment fails we should at once proceed either to forcible rupture or urethrotomy. Continuous dilatation will, no doubt, overcome such a stricture, but recontraction soon comes on in cases where the stricture tissue is hard and resilient, as in this case.

CASE II.—G. W., a cabinetmaker, æt. 45, rather intemperate, married. Had suffered in his young days from several attacks of gonorrhœa. For the last ten years had felt gradually increasing discomfort when passing water. He takes a long time to micturate, and requires to do so very frequently both night and day; latterly the urine came away only in drops.

9th April 1880.—Found slight difficulty in passing a small elastic bougie through the stricture, but then easily dilated the stricture to No. 7 at one sitting. On examining the stricture with an acorn-headed bougie, I found two narrow annular strictures about half an inch apart in the region of the bulb. Two days after, No. 11 size was reached without difficulty. A curious coincidence happened with reference to this case. His wife had borne children regularly until about five years before he consulted me. During these five years she had never become pregnant, but became so, soon after the dilatation of her husband's stricture. There is little doubt that stricture of the urethra interferes with the power of impregnation to some extent.

CASE III.—J. M., æt. 60, stableman. Had retention of urine twelve months ago. Is in a state of great misery, as he cannot keep himself dry night or day. Denies ever having had gonorrhœa.

22nd November 1880.—Introduced with difficulty No. 1 elastic bougie, and tied it in forty-eight hours. The stricture is situated immediately behind the scrotum. No. 1 was removed, and No. 3 put in its place. After forty-eight hours No. 4 could easily be introduced. This treatment had, however, to be stopped on account of bladder irritation, with bloody, muco-purulent urine. After giving the parts a rest, on 17th December I began dilating the stricture by the interrupted method, and by the beginning of January had succeeded in passing a No. 11 bougie. This patient did not stand well the continuous presence of instruments in his urethra. Had it not been for the difficulty of introducing a small bougie at first, I would not, in this case, have had recourse to the tying-in process.

CASE IV.—G. M., æt. 62, printer.

January 1880.—Had a clap fifteen years ago. Six years ago noticed a difficulty in passing water, with frequent desire to do so. Stricture situated 4 inches from the meatus. Had been in the habit of taking about three glasses of whisky daily. With great difficulty I succeeded in passing a No. 3 elastic bougie of the French scale, equal to about half the diameter of an English No. 1, and tied it in for forty-eight hours. In a week, by continuous dilatation, got up to No. 5 English scale. After that, by interrupted dilatation, easily advanced to No. 11.

CASE V.—J. H., æt. 51, had clap thirty years ago, at which time he drank heavily. Two years ago he gave up drinking, as it had such a bad effect on his bladder. His first attack of retention of urine occurred four years ago. In June 1879 was in the Infirmary for four weeks, and left without much improvement. On 12th February 1881 had retention for sixteen hours, but at the end of that time was able to pass some water with great difficulty. On 14th February I passed a No. 1 elastic bougie, and tied it in for forty-eight hours, and by continuous dilatation reached No. 10. The stricture was hard and difficult to dilate, and was situated a little in front of the bulb. The stricture showed a rapid tendency to recontraction, and on 20th March only admitted a No. 5. Without chloroform I ruptured the stricture with Holt's dilator. The patient made a good recovery.

CASE VI.—A. C., æt. 40, a soldier, has served abroad, and led a dissipated life; had several attacks of gonorrhœa. In 1856 had retention of urine, which required the use of the catheter; there was again retention in 1857 and in 1872.

28th February 1881.—Suffers greatly from pain over bladder, and difficulty in passing water; has to get up nearly every hour at night to make water, with great straining. There is a tight stricture in front of the triangular ligament. I introduced Nos. 1, 2, and 3 elastic bougies through the stricture.

4th March.—Is much more comfortable, passes water without straining, and has not to rise at night so frequently. Introduced Nos. 2, 3, 4, and 5 bougies.

In a short time a full-sized instrument could be passed.

Case VII.—J. J., æt. 25, unmarried, an officer in the army. Had suffered several times from gonorrhœa, and for a few years back noticed an increasing difficulty in passing water. This patient had two strictures, one situated 3 inches from the meatus, and another 2 inches further back. A few months before seeing him, an abscess had formed in connexion with the anterior stricture, which had burst externally, and healed without leaving a fistula. At this date (April 1881) there was a lump in the perineum about the size of a walnut, behind the posterior stricture. The lump was painful, but by rest in bed, bathing, and fomentations the inflammatory symptoms subsided. On 25th April Nos. 3 and 4 elastic bougies were passed through the strictures, when their consistency was found to be hard and cartilaginous. The perineal lump was getting smaller.

9th May.—Finding that no progress was made with interrupted dilatation, I tied in a No. 4 elastic catheter, which was retained for forty-eight hours. By 15th May No. 10 was reached. There was, however, slight local irritation, with an increase in the size of the perineal lump. The next day No. 10 catheter was removed, and Nos. 11 and 12 were passed easily through the stricture. No instrument was tied in, on account of the increase in size of the lump in the perineum.

23rd May.—As is usual after continuous dilatation, the stricture had contracted somewhat, No. 8 being the largest instrument which could be passed. The swelling in the perineum gradually disappeared, and the patient was taught to pass a bougie himself. During the next few months, although many attempts were made, no larger instrument than a No. 8 could be passed.

1st March 1882.—The strictures had now gradually recontracted, notwithstanding the careful efforts of the patient, and No. 3 bougie can only be passed. A gonorrhœa of six weeks' standing also complicated the case. As the strictures proved so resilient, operative interference was determined on, and, as a preparation, the patient was confined to bed and put on milk diet. The gonorrhœa being almost well, and as time was then of great importance to the patient, I performed internal urethrotomy by Maissoneuve's method on 19th March. The perineum was quite in a healthy condition, and the patient in a much more favourable state for operation than he was ten months before. Chloroform was administered, and the strictures were divided on the roof of the urethra. A No. 12 elastic catheter was passed, tied in, and retained for three days. Troublesome chloroform vomiting occurred, which lasted for eighteen hours, with a slight rise in temperature. With that exception, there was no bad symptom. A No. 12 bougie was passed on 24th March, and again on 11th April Nos. 12 and 13. The patient was then directed to introduce a bougie himself at regular intervals. The history of this case showed the temporary character of the relief afforded by continuous dilatation when the stricture tissue is very firm and resilient. The presence of gonorrhœa was a cause of considerable anxiety, and it would be advisable, under ordinary circumstances, to allow a much longer time to elapse between the cessation of a discharge and the performance of an operation on the urethra, although, in this case, fortunately, no bad effects ensued.

Case VIII.—N. W., æt. 54, an old soldier; seen service in India. Had led a dissipated life, but said he never suffered from gonorrhœa, although he had had other forms of venereal disease. He had retention of urine six months ago, after exposure to wet and cold, and while drinking heavily. Since then has had great difficulty in passing water, the urine coming in drops with severe straining. Had very frequent calls to micturate both night and day. On 7th April 1881 I introduced with difficulty a small French elastic bougie, equal to half an English No. 1, and succeeded at that sitting in dilating the stricture up to No. 5. By 16th April a full-sized bougie could be passed.

Case IX.—J. B., æt. 45, shoemaker. Two years ago I dilated this man's stricture up to No. 12 by continuous dilatation. In April of this year he consulted me again, as the stricture had become as bad as ever.

On the first occasion I failed to pass an instrument. Four days later another unsuccessful attempt was made. At this time he suffered severely from frequent and painful micturition, the water often coming away in drops after great straining. I advised him to stay in bed one Sunday, and to take a hot bath before my visit on Monday morning. I then succeeded in passing a small elastic bougie, a size smaller than No. 1 of the English scale. This instrument I tied in, and allowed him to go to work. The urine came away easily outside the bougie, and he continued his work in comfort. The bougie was retained for three days, when a No. 4 elastic catheter was substituted for it. The catheter was retained for two days, until Saturday afternoon, 22nd April. On this day I introduced Holt's dilator and ruptured the stricture, which was situated far back in the urethra. The urine was drawn off immediately after the operation by a No. 11 catheter. No chloroform was given, and the patient did not complain of much pain. He was only two days off work. On 4th June a No. 12 bougie was introduced without difficulty.

Remarks.—In the early stage of these cases, when fine instruments were required, I invariably used elastic ones. The pain of the operation is thus minimized, and the safety of the urethra is increased. It is also much safer to tie in a small elastic instrument than a metal one. When a very fine instrument is used, a bougie is better than a catheter; it is less flexible, and so more easily manipulated, and removes the urine just as well as an extremely small catheter. When interrupted dilatation fails, it seems to be a waste of time to try continuous dilatation, except as an assistance to operative interference. Other things being equal, I consider forcible rupture with Holt's dilator a safer operation than internal urethrotomy.

ARTICLE VII.—*On a Rare Form of Senile Gangrene.* By JOSEPH BELL, F.R.C.S. Ed., Surgeon to the Royal Infirmary.

W. H. æt. 75, a very healthy, temperate, contented old man, of spare habit and fairly healthy arteries, was sent into Hospital, under my care, by Dr Bentley of Kirkliston, on 17th January 1882. The second toe of his right foot was black and evidently dead. He said that a few days before admission he had met with an accident, the iron plate of a retort having fallen on his foot. The whole foot was red and swollen; not much pain, and no constitutional disturbance. On 24th January the dead toe was nipped off with scissors, no blood being lost; the tendons alone required division. The bones were noticed to be curiously macerated, as if they had lain long in water. In another fortnight the third toe, which on admission had been alive and healthy, except for a slight redness, also died and was lifted off, the bones being macerated, and this time the tendons also destroyed. The resulting gap left by the removal of these two toes was large but painless, and suppurated freely with little odour. Up to 10th March all went well, and the wound was nearly healed. The extremities of the second and third metatarsals had separated from their shafts at the epiphyseal junction, and were lifted out with ease.

On 10th March, however, without either pain or elevation of temperature, a dark blush was noticed all over the great toe, which had hitherto looked healthy, and half way up its metatarsal bone. The circulation in this area was exceedingly sluggish, the finger leaving a white dimple on pressure, which took several seconds to refill with blood. After two or three days of doubt a bulla was noticed to form just on the dorsum of the metatarso-phalangeal joint. This bulla rapidly raised the cuticle to the size of a florin, and, being cautiously cut into, showed the true skin, not, as usual in such cases, either shrivelled up or sloughing, but as if it had melted into a shreddy pultaceous mass, and this involved not only skin, but cellular tissue, ligaments, and periosteum, for by 20th March, without any displacement of parts, suppuration, or odour, the proximal phalanx and metatarsal head were both exposed as if thoroughly macerated, and lay loose in this pultaceous mass. The edges of the ulcer or cavity were everted and undermined as if by a gumma, were of a pinky redness, but exhibited no granulations or any attempt at repair. Having watched many cases of senile gangrene to death or recovery, and having had two or three cases of gangrene from embolism also for months under careful observation, I am quite familiar with the usual processes of separation, whether moist or dry; but I have never seen or read of any case in the least resembling this one, whether in its rapidity of maceration of tissue, its curious cessations or intermissions, its freedom from pain, and apparently trifling effect on the constitution.

The treatment was purely expectant, no interference that could be avoided, absolute rest in bed, milk diet, which was well borne, and locally keeping the limb at an equable temperature by cotton wadding (carbolized) and marine lint to sop up discharges.

The result has been remarkable. To-day, 30th June, the apparently dead and macerating heads of metatarsal and first phalanx have recovered themselves, granulations have formed, and now the wound has closed, with the exception of a line of granulations about a quarter of an inch long and one-sixth of an inch broad, under which can be felt a thin scale of carious bone. The old man is quite well, and goes home this week.

ARTICLE VIII.—*Case of Hyperpyrexia in Acute Rheumatism; Cold Bath; Recovery.* By ROBERT SINCLAIR, M.D., Physician to the Dundee Royal Infirmary.

IT will probably be conceded that in proportion as any remedy shortens the course of rheumatic fever it diminishes the risk of an extreme elevation of temperature. To what extent the methods of treatment hitherto adopted have contributed to this end it is impossible to say, as we are not in possession of statistics to show the ratio in which hyperpyrexia occurs among cases unattacked by radical measures. This much is unfortunately true, however, that it has occurred in spite of all the drugs with which the disease has been assailed, and that it has occurred, moreover, in the practice of the most accomplished physicians.

The signs which indicate the approach of this dangerous complication are,—cessation of pain and perspiration; delirium; vomiting; cyanosis; the excretion of a large quantity of urine of low specific gravity; accelerated pulse and respirations, without concomitant cardiac or pulmonary mischief to account for them.

A temperature of 107° F. occurring rapidly, and preceded or accompanied by any of the above warnings, has usually been considered the index of impending death. Bleeding, blistering, large doses of quinine, veratrum viride, salicin, salicylate of soda, alkalies, digitalis, opium, alcohol, aconite, and Warburg's tincture, though perhaps valuable as accessories, are of themselves all alike powerless in presence of this terrible complication.

To Dr Wilson Fox belongs the credit of solving the problem of the successful treatment of the hyperpyrexia of acute articular rheumatism by means of the external application of cold. His first case, though it terminated fatally, drew attention to two important points, viz., that a bleeding of between 20 and 30 ounces, while it calmed the delirium, had absolutely no effect in arresting the rise of temperature, and secondly, that it was possible, by the vigorous application of cold, to keep a patient alive for 36 hours after a temperature of 109° had been reached.

His second and third cases were fortunately brought to a successful termination, and firmly established the bath as a therapeutic measure in this complication. Since the publication of his results this method has frequently been adopted with such success that its value may now be regarded as beyond the reach of scepticism.

In the following case the advent of hyperpyrexia was attended by three of the warnings above mentioned, viz., delirium, rapid pulse, and cessation of perspiration. The highest temperature, 107°·4, was reached eight minutes after the patient was placed in the bath, which was gradually cooled from 90° to 60°, with the result that after 28 minutes' immersion her temperature had fallen to 100°·6, and her condition otherwise had very much improved. I must not omit to call attention, however, to the alarming appearance which she presented thirteen minutes after being placed in the bath. At that time her removal to bed was seriously contemplated, in order to avoid so unfortunate an occurrence as a fatal issue during the continuance of such exceptionally vigorous measures. That she did not die was, I have no doubt, due to the perseverance with which at this juncture the ice was thrown into the bath, and large pieces of it were held in contact with the neck, chest, and spine.

It will be seen from the report that no return of excessive heat occurred, and that on the only occasion on which the temperature rose to 103° it speedily fell after the application of ice-bags to the spine, though I am not at all sure that it fell in consequence of them, inasmuch as the fall had begun before they were applied.

From the subsequent history it will be readily inferred that salicin exerted a very feeble influence on the rheumatic state. Between 17th January and 5th February the patient had no less than 2210 grains, or rather more than 4½ ounces, without coming down to a perfectly normal temperature. I then had recourse to acetate of ammonia, a very innocent drug in acute rheumatism, according to all recognised authorities. No striking results were expected, and none were obtained. A week later dialysed iron was ordered; and on 27th February the patient was dismissed well.

In conclusion, I have to take this opportunity of tendering my warmest thanks to my friends Dr M'Cosh, the medical superintendent, Dr Templeman, the resident assistant, and the nurses of the ward, for their invaluable co-operation during a very anxious time.

Margaret H., æt. 25, domestic servant, was admitted into Ward XXII. of the Dundee Royal Infirmary on 12th January 1882, on account of a first attack of rheumatic fever.

History.—A fortnight ago, after exposure to damp, patient was attacked with erysipelas of both feet, which lasted a week, and was almost immediately followed by pain and swelling of the ankle and toe joints. Subsequently the knee, hip, shoulder, elbow, wrist, and finger joints became affected.

Condition on Admission.—Patient is a healthy-looking girl, and does not appear distressed. Both knees, shoulders, elbows, wrists, and hands are swollen and painful. Physical signs of heart and lungs normal. Skin dry. Appetite fair. Bowels regular. Tongue moist and furred. Pulse 120; Temp. 103°·2. Ordered 10 grains of Dover's powder at bedtime.

January 13th.—Slept a little. Skin drenched with perspiration. Urine of normal colour, acid, 1020; contains albumen. Temp. 103°·2. Ordered 20 grains of salicylate of soda every hour for six hours. Ev. temp. 103°.

14*th*, 7.30 A.M.—Temp. 105°·4. Retained the six doses of salicylate of soda yesterday. Was delirious from six o'clock last night till four o'clock this morning, after which she was quiet and had a little sleep. Is now quite sensible. Skin dry, and has a very pungent odour.

10 A.M.—Temp. 107°.

11.40 A.M.—Temp. 107°·2; pulse 156. Patient is quite delirious. To have 10 grains of sulphate of quinine at once.

Preparations for the cold bath were ordered to be made with the least possible delay. An ample supply of ice was sent for, and the bath-room adjoining the ward was prepared. A few minutes after one o'clock, everything being ready, the patient was placed in a bath at a temperature of 90°, which was gradually cooled by the almost constant addition of ice. The following tabular statement is an accurate record of the observations taken at the time:—

Time.	Temp. of Bath.	Temp. of Patient in Mouth.	REMARKS.
1.6 P.M.	90°		Patient placed in bath while quite unconscious and delirious.
1.14 "	82°	107°·4	
1.19 "	68°	106°	Almost pulseless. General condition so bad that we were almost tempted to remove her from bath, in case of a fatal result, which seemed almost impending. Did not do so, but added ice more quickly, and held large pieces in contact with skin.
1.24 "	63°	104°	Consciousness rapidly returning. Poured into mouth ℥ss. of brandy, which was swallowed.
1.29 "	62°	101°·4	
1.34 "	60°	100°·6	Taken out of bath, dried, rolled in blankets, and put to bed.

In order to catch the first warning of the return of hyperpyrexia, the temperature was taken in the axilla very frequently, as will be seen from the subjoined Table:—

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Time.	Temp.	Remarks.
1.40 P.M.	98°·4	
2 „	98°·4	
2.30 „	98°·4	
3 „	98°·4	
3.30 „	98°·6	
4 „	99°	Conscious.
5 „	100°	
6 „	100°	
6.30 „	100°	Asleep.
7 „	102°	Has been quiet all afternoon. Still conscious. No pain.
7.30 „	103°·8	Skin moist.
8 „	103°·4	
9 „	103°	Pulse 136, volume good. Resp. 36. Ice-bags to spine.
10 „	103°	Still quite sensible.
11 „	102°	
12 „	101°·4	
15th January.		
1 A.M.	101°	
2 „	100°·8	
3 „	100°·4	
4 „	100°·4	
5 „	100°	
6 „	100°	
7 „	100°	
8 „	100°	Has slept fairly during night. Bowels moved naturally.
9 „	99°·4	Quite sensible and quiet.
10 „	99°	Pulse 100, good. Resp. 24. Feels arms and legs "a little fatigued," but has no pain. Cardiac sounds clear and distinct. Dulness normal.
11 „	99°	
Noon	99°·4	
1 P.M.	99°·8	
2 „	99°·4	
3 „	99°·4	
4 „	99°·4	
5 „	100°	Pulse 86, good. Resp. 22.
6 „	99°·4	
7 „	99°·8	Ice-bags, which have been kept in contact with spine since 9 o'clock last night, now discontinued.
8 „	99°·4	
9 „	100°·4	
10 „	100°·8	
11 „	100°·8	
12 „	100°·4	

16th.—Did not sleep during night. Quite conscious. Feels stiff, but has no pain. Tongue moist and cleaning. Pulse 88. Resp. 24. Highest temp. to-day 101°·8, at midnight; lowest, 100, at 6 A.M. and 2 P.M.

17th.—Slept well. No delirium. Pulse 96. Resp. 20. Perspiring freely since 8 A.M. Pain in elbow and finger joints. To have 20 grains of salicin every hour for six hours.

18th.—Slept well during night. Skin moist. Tongue moist and cleaning. Physical signs of heart normal. Highest temp. to-day 101°·6, at 5 and 9 P.M.; lowest, 100°, at 10 P.M.

19th.—Slept well. No articular pain. Pulse 96, good. Highest temp. to-day 100°·8, at 2, 5, and 8 P.M.; lowest, 100°, at 6 and 7 P.M.

20th.—M. T. 99°·6; Ev. T. 100°·8.

21st.—M. T. 99°·8. The salicin, which has been given daily since the 17th in 20-grain doses every hour for six hours, was to-day reduced to 20-grain doses three times a day. Ev. T. 101°·4.

22nd.—M. T. 99°·8. Pain in joints of right arm. Ev. T. 101°·6.

23rd.—M. T. 101°. Pain between shoulders and in joints of both arms and hands. To have 20 grains of salicin every hour for six hours. Ev. T. 101°·4.

24th.—M. T. 101°·2. Pain continues. To have 8 doses of 20 grains each to-day. Ev. T. 101°·8.

25th.—M. T. 100°·6. Pain gone, but arms still stiff. Slept well. To have salicin as yesterday. Ev. T. 101°·4.

26th.—M. T. 100°. Pain has returned to a slight extent in elbows and wrists. To have 8 doses of 30 grains each to-day. Ev. T. 100°·6.

27th.—M. T. 99°·4. Powders as yesterday. Ev. T. 100°.

28th.—M. T. 99°·8. No pain. Ev. T. 99°·6.

29th.—M. T. 99°. Was sick after having three powders yesterday; they were therefore discontinued. Ev. T. 98°·8.

30th.—M. T. 98°·4. Slept well. Had 4 powders yesterday. Ev. T. 99°·6.

31st.—M. T. 98°·6. To have 4 powders, each containing 20 grains. Ev. T. 99°·8.

February 1st.—M. T. 99°; Ev. T. 99°·2.

2nd.—M. T. 98°·8; Ev. T. 99°.

3rd.—M. T. 99°; Ev. T. 99°·8.

4th.—M. T. 98°·8; Ev. T. 99°·8.

5th.—M. T. 99°; Ev. T. 99°·6.

6th.—M. T. 99°; Ev. T. 99°. No pain. Slight stiffness in elbow. Heart normal. Omit salicin. To have ℥ss. of acetate of ammonia mixture three times a day.

7th.—M. T. 99°·2; Ev. T. 99°·8.

8th.—M. T. 98°·8; Ev. T. 99°·4.

9th.—M. T. 98°·6; Ev. T. 98°·8.

10th.—M. T. 99°·2; Ev. T. 99°·2.

11th.—M. T. 98°·4; Ev. T. 98°·6.

12th.—M. T. 98°·4; Ev. T. 98°·8.

13th.—M. T. 98°·4. Omit mixture. To have ℥ss. of dialysed iron mixture three times a day. Ev. T. 99°.

27th.—Discharged well.

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Part Second.

REVIEWS.

Diseases of Women, including their Pathology, Causation, Symptoms, Diagnosis, and Treatment: a Manual for Students and Practitioners. By ARTHUR W. EDIS, M.D. Lond., F.R.C.P., M.R.C.S., Assistant Obstetric Physician to the Middlesex Hospital, etc. With illustrations. London: Smith, Elder, & Co.: 1881. Pp. 541.

ON looking over this book, exceeding as it does in size some of the text-books on the practice of medicine, and in view of the fact that the subject treated of is only presented to the student—and not necessarily to every student—in, at the outside, a dozen and a half lectures, the reflection is forced upon us that the author of this work has a little overestimated the zeal or the necessities of medical students. Looked at as a manual for them, its publication may be said to be premature, in respect that the curriculum is one of four years, and not of ten. To practitioners the work may be more useful and applicable, though we venture to think that any practitioner compelled or desirous to practise gynæcology, not as a specialty, but now and again as cases may present themselves, will find one of the standard books of reference a plainer, pleasanter, and more profitable guide than would be a work like the present, which we would be inclined to regard as a cross between a text-book and a treatise.

It is, however, from this standpoint that we must consider the work, and see whether it can be said to fulfil the author's expectations of proving "a reliable practical clinical guide" for those who, "from lack of time or opportunity during their student career, neglected to make themselves familiar with a subject which will form a most important item in the daily routine of practice," and who by its use "may be enabled to repair the omission."

The first thirty pages, devoted to oral and physical examination of women, are especially good. The dorsal position is recommended, and the value of the bimanual examination insisted on, though, curiously enough, the author would seem to confine himself to the use of one finger in the vagina—a refinement of delicacy which is unnecessary, and which considerably limits the extent of an examination. Great caution is very wisely enjoined regarding the use of the sound and of tents.

This part of the work is decidedly spoiled by the illustrations of pelvic sections. An excuse might be found for Fig. 2, "Method of Bimanual Examination," from the fact of its being after Marion Sims's classical drawing; but Fig. 1, "Outline Diagram showing Section of Pelvis," with a vagina six inches long and two inches antero-posteriorly, a uterus an inch thick, and a globular bladder with walls about a line in thickness, and hardly any urethra, filling up all the available space in front of the vagina (the measurements being compared with that of the uterine cavity), can hardly be said to afford a very "reliable practical guide." When on this subject we would venture to ask where the pessary represented in Fig. 34, "Hodge *in situ*," is deriving any support from, or whether the author would like us to infer that pessaries differ from other objects in possessing the power of floating upon nothing.

After a short chapter on malformations of the uterus, in which the metrotome is greatly lauded, fully one-eighth of the book is taken up with a consideration of displacements. In the preface the admission is made that too much prominence is given to mechanical treatment, which is done that the subject may be fairly represented, and the reader is cautioned against placing too great reliance upon mechanical appliances; but we question very much the judiciousness of submitting this part of the book for the guidance of "those who have neglected to make themselves familiar with the subject during their student days." On the whole, this is the most unsatisfactory section of the work; and though we are far from expecting any two men absolutely to agree about displacements, there is here some loose writing on the part of the author which is not creditable. For instance, p. 71, "Congenital anteflexion is of much more frequent occurrence than congenital retroflexion" seems to us rather a mild way of making a statement, considering that Rokitansky, Freund, Schröder, Hildebrandt, Credé, and many others distinctly state that congenital retroflexion never occurs,—that is, that they have never seen it at post-mortem examinations of children,—and the only reported cases we have been able to find have evidently been malformations. The following sentence, too, is very vague: "Retroversion is not of frequent occurrence as an idiopathic primary lesion in the unmarried, nor is it common in those who have not borne a child." The only satisfactory division of women, when questions of etiology are to be considered, is into virgins and those who are evidently not virgins, and these latter, again, into those who have had children and those who have not. The distinction between married and unmarried is misleading, as very many of the latter are really on the same footing as the former and should be classed along with them.

The propriety or utility of giving a patient directions as to the self-adjustment of a Hodge's pessary (by the author still designated "lever") is open to question. When a pessary is introduced without the uterus being first carefully replaced, full advantage is not taken of its powers, and we have seen too many badly applied instruments to give us any confidence in a woman's ability to adjust the upper bar behind the cervix in her own person.

The chapter on vascular disorders of the uterus is good, the revulsion treatment recommended is worthy of trial, and we are glad to see prevention of chronic metritis so strongly insisted on.

Emmet's operation is given a short but fair consideration, which, though it might not satisfy the demands of our American brethren, is as advanced as anything hitherto said in its favour in this country. The description of the operation might, however, have been made clearer.

At page 130, when describing the condition of chronic cervical endometritis, the author says, "The discharge is at first of the nature of boiled starch, thick, viscid, albuminous," which seems uncommonly like a description of the normal cervical secretion. If we are to treat all cases in which this is found, as we would naturally infer from the context, we have truly a happy hunting-ground before us. Then, again, while at page 118, "In some cases where the os is pinhole and tends to keep up the congestion by preventing free exit of discharges, the curved scarificator is of service," etc., while further on, page 447, we have an elaborate calculation as a "reply to those who contend that the cervical canal is too small to allow the slow and gradual stillicidium of the catamenia through the canal" ("at least three-sixteenths of an inch in diameter," but the argument is equally good for a pin-hole), showing that the rate of passage of menstrual blood at a maximum average is only two-thirds of a drop per minute.

On the whole, the author perhaps rather errs on the side of over-treatment, and too much cervix tinkering is recommended, especially when we consider the class of readers to whom the work is addressed.

The chapters on new formations of the uterus, fibroids, cancer, etc., are well up to date and eminently practical, as is also that on oöphoritis. The same may be said of the part devoted to ovarian tumours, where a very praiseworthy feature of the book is fully developed—that is, the use of double columns, in which the history, symptoms, etc., of conditions which may be confounded are set systematically opposite each other. In this way the diagnosis of the varieties of ovarian tumours, and of these, again, from other tumours, ascites, pregnancy, etc., is graphically and clearly shown.

We have already been led too far in our consideration of this work to allow us to do more than merely indicate the scope of what remains. Pelvic inflammations, hæmatocele, and extra-uterine gestations are carefully and concisely treated, and then follow chapters on diseases of the vulva and vagina, of which it may be said that surely nothing has been omitted. Lacerations of the perinæum and fistulæ are shortly and fully dealt with, and a chapter is devoted to affections of the bladder. A consideration of functional disorders, hysteria, dyspareunia, coccygodinia, the climacteric period, etc., closes the book, which it will thus be seen is of a very exhaustive character.

Numerous prescriptions are interspersed with the text, which greatly add to its value, and will doubtless prove acceptable. A little more care might, however, have been given to their dictation.

Die Krankheiten der Frauen: Aerzten und Studirenden geschildert. Von Dr HEINRICH FRITSCH, Professor der Gynækologie und Geburtshülfe in der Universität zu Halle. Mit 159 Abbildungen in Holzschnitt. Braunschweig: Wreden's Sammlung Kurzer Medizinischer Lehrbücher. 1881. (*The Diseases of Women: for Practitioners and Students.* By Dr H. FRITSCH. With 159 Woodcuts. Wreden's Library of Short Medical Text-books.)

WE have here a German work written for the same class of readers as Dr Edis appeals to.

It forms the first volume of an intended series, to be issued on the same lines as the Libraries of Standard Authors published by Wood in America and Low in this country, and which, if we are to judge by the specimen before us, will be of a very high and satisfactory character.

Dr Fritsch's style is careful, clear, and condensed; indeed, it is wonderful to see how much is contained in the 400 pages which constitute the work, and how the author has been able to produce such a pithy combination of a text-book and a treatise. As a satisfactory exposition of the gynæcology of to-day, and coming as it does from a country to whose workers the subject owes so much of what is helping to place it on a solid foundation, we would commend the work to the consideration of all who are able to avail themselves of it.

A notable and novel feature is a succinct and practical chapter on antiseptics in gynæcological practice.

We have only to add a word of commendation on the character of the woodcuts, and to state that the work is not disfigured by any of those ancient absurdities of which we had occasion to take notice in referring to Dr Edis's book.

Travaux d'Obstétrique et de Gynécologie. Par G. PAJOT, Professeur d'accouchements, etc., à Paris. Paris: H. Lauwereyns, Libraire-éditeur: 1882. (The collected works of Professor Pajot.)

THIS book resembles the collected works of Sir James Simpson, with this exception, that it has been issued during the lifetime of its author. Here, as in Simpson's works, we have a copy of the tables used on the black-board in the lecture-room, at the end of which the following noteworthy "Principle which dominates all Midwifery" is given:—"The duty of the accoucheur is patience. One should not interfere without a decided indication. But as soon as ever that indication is presented, it must be attended to without delay, and it must never be forgotten that, in midwifery, methods of interference which will save two beings are at the right time easy, but will become in a few hours futile, dangerous, or impossible."

In the obstetrical section of the work there is a very careful and useful consideration of "The Causes of Error in the Diagnosis of Pregnancy." Then follows "The Mechanism of Labour in Normal Cases and in Cases of Deformed Pelvis," "Cephalotripsy," and numerous shorter papers, including two or three on Anæsthesia. In the gynæcological section there are critical reviews on the works of Courty and Thomas, and papers on various subjects, all of them, however, having a bearing on the question of sterility. This part of the book is particularly practical, and is enriched, and at the same time enlivened, by the recital of numerous cases and anecdotes, narrated in a style decidedly piquant and characteristically French. The author has devoted a good deal of time to the subject of sterility in the male, and gives the results of his examinations of the spermatic fluid of over 200 men of various nationalities, and of ages from 25 to 60, and he emphasizes the fact, of which too little notice is generally taken, that in sterile marriages oftener than one is disposed to imagine the fault lies at the door of the husband. He says, "It is useless to attempt the cure of sterility by attacking the woman (provided there be no decided disease or defect on her part) without first being assured of the physiological activity of the genital apparatus of the husband, and without knowing into what category the husband ought to be placed," he having previously divided men, according to the character of their spermatic fluid, into four classes, thus:— 1. Those in whom it is rich. 2. Those in whom it is ordinary. 3. Poor or insufficient. 4. Absolutely worthless.

We are sure that this book will form a useful and interesting addition to the library of the specialist.

The Journal of Anatomy and Physiology, Normal and Pathological.

We have received the *Journal of Anatomy and Physiology* for April. It opens with a paper by Dr Milnes Marshall of Owens College on the "Segmental Value of the Cranial Nerves," considered from an embryological point of view.

Dr Sims Woodhead contributes a valuable paper on "Some Pathological Conditions in the Medulla Oblongata, etc., in a Case of Locomotor Ataxia." He follows out a suggestion of Dr D. J. Hamilton's, that the absence of axis cylinders and the presence of colloid bodies in locomotor ataxia, etc., may be due to a condition of inflammation of the cord—in which the axis cylinders become varicose and the nerve sheath distended—similar to that seen in cases of acute myelitis artificially induced. The process appears to consist, first, in the formation of moniliform swellings in the course of the axis cylinders. These swellings, then, undergo a colloid change, followed by fatty degeneration and the ultimate disappearance by absorption of the axis cylinders. He also contends that the growth of connective tissue, so characteristic of locomotor ataxia, is secondary to the collapse of the medullary sheath (which takes place after the axis cylinder has been absorbed), and is due to decreased pressure owing to that absorption. He believes that this lesion also explains the ataxic symptoms; that an impulse passing to the brain is delayed by having to traverse these swellings. Thus impressions starting at the same time from the periphery reach their destination at different times, and so cause false impressions to be felt by the patient.

We have also another instalment of Dr Matthew Hay's elaborate series of experiments on the "Action of Saline Cathartics."

Archives of Laryngology. Vol. III., No. 1. New York.

THE first paper is the completion by Dr Elsberg of his articles on the "Structure of Hyaline Cartilage." His conclusion, the result of his investigations as to the structure of the above, is that in this tissue the living matter is arranged in the form of a net work, containing in its meshes the non-contractile matter; and he also thinks that the living matter of the various tissues—*e.g.*, cartilage, subcutaneous tissue, and skin—pass from one to the other.

From Dr Glasgow of St Louis we find two contributions, the first being a description of his method of operating for the rectification of deflections of the nasal septum—merely a modification of that of Dr Adams; the second being the relation of a case of paralysis of the crico-arytenoideus posticus muscles, which caused grave symptoms, and from which the patient, a medical man, almost quite recovered, and that by little or no treatment; at least he found that medicines which were ordered him did him no good, so that he gave up taking anything, with the above-mentioned happy termination of his disease.

Dr Seiler has a short paper on the effect of the nasal cavity upon the voice and articulate speech, and Dr Roe relates a case of laryngeal whistling, in which a young lady could at will whistle perfectly with the lower part of her throat, without the aid of her lips or any portion of the buccal cavity. He found, on examination, that ventriloquists produce their wonderful effects in like manner, and that in both cases the same movements occurred in the larynx.

The question of hæmorrhage after tonsillotomy is discussed by Dr Lefferts of New York, who warns the operator to be ready to cope with even a dangerous hæmorrhage after the removal of the gland, and he points out that this is due, not unfrequently, to the spouting from a single vessel, often a branch of the ascending pharyngeal.

Dr Morgan of Washington has a paper on diphthonia or double voice, in which he explains how, to his mind, this is brought about both physiologically and pathologically. He relates a case of his own, and we would only mention his method of prescribing, which, to say the least, is somewhat peculiar to our ideas, and will probably restrain his readers from endeavouring to reduce it to such a formula that our pharmaceutists, at any rate, could easily and safely dispense it. "I used as a local application to the larynx: zinc chloride, 0·75 gm. in 32·00 of water: and as an inhalation, alum, 15·00; aq. extract of opium, 0·20; glycerine, 50·00; rose water, 250·00." "A few days elapsed, and I administered strychnia, 0·0003, three times a day," etc.

Dr Sajous, Philadelphia, relates a case of abductor paralysis due to lead poisoning, and Dr Major of Montreal discusses phonation on inspiration, a cause of hysterical aphonia, giving a case. The last paper is by Dr Gleitsmann, in which he relates a case of membranous syphilitic stenosis of the trachea, in which a complete cure was effected by the long and continued use of antisyphilitic remedies.

Koumiss, or Fermented Mare's Milk, and its Uses in the Treatment and Cure of Pulmonary Consumption and other Wasting Diseases.

By George L. Carrick, M.D., L.R.C.P. & S.E., etc.

Few if any English physicians can have had the special opportunities of investigating the action of koumiss which Dr Carrick has enjoyed, and that he has made a full and appreciative use of them this valuable work fully testifies. It is interesting to find that the first person to call attention to the remarkable nutritive qualities of this fermented milk and its therapeutic uses was a Scottish surgeon, Dr John Grieve, who in 1784, when serving in the Russian army, communicated to the Royal Society of Edinburgh "An Account of the Method of making a Wine called by the Tartars Koumiss; with Observations on its Use in Medicine." Ever since then the fame of the cures which followed the sending of phthisical patients to the steppes, to drink koumiss, has gradually spread throughout Russia and Europe generally. Regular koumiss establishments have been opened for the reception of patients near Samara, on the Volga, and these are now flocked to by numerous patients.

The fermentative changes which the mare's milk undergoes during its conversion into koumiss consist in the conversion of a certain percentage of the lactine into alcohol and carbonic acid, with traces of glycerine and succinic acid, and the solution of a portion of the casein in the whey, while the greater part separates out.

The great object is to encourage the venous at the expense of the lactic fermentation.

The fermentation is started in various ways, the most simple and most common being the addition to the fresh milk of some old koumiss. The milk is continuously agitated for twelve hours at a temperature of not more than 94° Fahr., and at the end of that time a weak koumiss will have been prepared. When this liquid has been allowed to stand for twelve hours more, at the ordinary temperature it passes into medium koumiss. Strong koumiss is produced by continuous agitation of the milk for forty-eight hours. It is thin and watery, and is more acid in taste than the medium and weak variety, containing more alcohol and carbonic acid. This is the only kind of koumiss which can be kept for any length of time. When bottled it separates into three layers, oil globules above, serum in the middle and casein below. The bottle should therefore be well shaken before the koumiss is drunk.

After a copious draught of koumiss a sensation of coolness is experienced at the pit of the stomach, which is soon succeeded by a more than corresponding degree of warmth, the cardiac pulsations are quickened, and there is felt a strong indication towards the *dolce far niente.* When the beverage is strong and the quantity taken large, slight intoxication occasionally follows, which, however, shows itself rather by drowsiness than by excitement. Koumiss also acts strongly (as one would anticipate) on the kidneys and skin, causing profuse diuresis and diaphoresis.

As a therapeutic agent koumiss is chiefly of value in phthisis and in albuminuria. The author gives details of numerous cases of consumption which he has personally observed both before and after residence on the steppes, as well as statistics of the results obtained in the government koumiss establishment at Samara. These all point to a very favourable influence which this drink exercises in phthisis, when combined with the healthy and bracing out-of-door life which the invalids there live. He narrates the case of a lady who, carried thither in a moribund condition, had so far recovered in fourteen months as to be able to dance with him "a quadrille, a waltz, and a polka during a single evening!" In phthisis the patient ought to drink as much koumiss as possible, the weak variety being, as a rule, the best. Into the many other interesting points which the author here touches upon we cannot enter. The book is a very readable one, and will amply repay perusal.

Bacon and Shakespeare on Vivisection. In reply to Dean Plumptre. Melbourne: Sands & M'Dougall: 1881.

THIS is a sumptuously printed pamphlet, very creditable to the colonial publishers, and attractive to all readers. It does not contribute much to the cause of vivisection, although some arguments in favour of the practice are happily put. Dean Plumptre, whose work we have not seen, appears to have quoted both Bacon and Shakespeare as anti-vivisectionists, warning their readers that to experiment on the lower animals may lead to poisonous experiments on man: "Which first, perchance, she'll prove on cats and dogs, then afterwards up higher." This offered a temptation, not to be resisted, to Dr W. Thomson of Melbourne, who had already written a book, *Renascence Drama, or History made Visible*, and two pamphlets, to show that Lord Bacon, and not Shakespeare, was the author of the sonnets and plays usually attributed to the latter—a temptation to resume his favourite subject, while combating the Dean for his attack on vivisection. We were not previously aware of Dr Thomson's theory. He evidently holds it very tenaciously, and displays a great familiarity with Bacon's works and with cotemporary literature.

The question, "Who wrote Shakespeare?" and the answers, Ben Jonson or Finis, in "High Life below Stairs," are not so absurd after all; and some of our readers may be interested by this bold note from the antipodes, setting at defiance all preconceived notions in regard to our immortal poet.

On the Antagonism between Medicines and between Remedies and Diseases; being the Cartwright Lectures for the Year 1880. By ROBERTS BARTHOLOW, M.A., M.D., etc. New York: D. Appleton & Co.: 1881.

THAT the selection of Dr Bartholow to inaugurate the Cartwright Lectures was a very wise one the work before us affords ample evidence. These lectures are able and thoughtful, and worthily represent the medical science of our Transatlantic brethren.

In the first four lectures the author treats of the antagonism of medicines in a very exhaustive fashion, collecting from the very scattered literature of the subject whatever is of importance. He dwells most, perhaps, on the antagonism of opium and belladonna, and then on that of atropia and physostigma, pilocarpin, muscaria, quinia, bromide of potassium, and aconite, of chloral and strychnia, and many other less important antagonisms. But perhaps the most interesting lectures are the last two, in which Dr Bartholow discusses the antagonism between remedies and diseases. Fever, he points out, may be combated in this way in all its important manifestations. Quinine and morphia, when administered together in sufficient quantity, will often check a commencing suppuration; and he holds that they do this in virtue of the power they have of raising the tonus of the arterioles, of checking the migration of leucocytes and their amœboid movements, and diminishing the outward diffusion of albumen, fibrin, and salts. When, however, the inflammation has reached a later stage, and it becomes desirable to accelerate the absorption of an exudation, the author strongly recommends the exhibition of chloral, which, he says, possesses the power of "dissolving the exudation."

Dr Bartholow's remarks on the antagonism of medicines to heart irregularities are characterized by remarkable freshness and point, although we do not agree with everything that is said. Indeed, those chapters which deal with the antagonism between remedies and diseases are replete with suggestive indications, which afford much material for thought. These lectures are a valuable contribution to current medical literature.

History of Medicine in Massachusetts: a Centennial Address, delivered before the Massachusetts Medical Society at Cambridge, 7th June 1881. By SAMUEL ABBOTT GREEN, M.D. Boston.

THIS address, which was too long for delivery on the occasion referred to, is now published entire in an elegantly printed volume of 131 pages. It is full of interesting matter, and leads us back to the very commencement of the colony, which the Pilgrim Fathers founded in 1620; for among these earnest men was Samuel Fuller, a deacon, who acted as their sole physician until his death in 1633, which deprived the settlement of one of its most valued and useful inhabitants. The growth of medical knowledge is traced with much care by Dr Green, and many interesting facts are mentioned very illustrative of that vigorous, irrepressible growth which has characterized the Anglo-Saxon stock since it was planted in the virgin soil of North America. The introduction of variolous inoculation, although justly credited to the Rev. Cotton Mather, was really effected by the enlightened zeal and indomitable courage and perseverance of Dr Sabdiel Boylston, who took up the practice of it, amid the most violent opposition of his professional brethren, in 1721. A similar battle had to be fought by Dr Benjamin Waterhouse of Cambridge when the great discovery of Jenner was introduced towards the end of last century. He, like Boylston, proved that his faith in the new procedure was real by making his own child the subject of experiment. Such men deserve to have their names recorded, and we are glad to recognise their claims.

The State of Massachusetts is about one-quarter the extent of Scotland, having an area of 7800 square miles. The population is about a million and a half. Harvard College, Boston, is now the representative of its medical progress; and we learn from Dr Green that the medical society whom he addressed has borne on its rolls the names of 3700 persons, and that the present membership includes 1350 physicians, coming from all parts of the Commonwealth.

We in the mother-country cannot but feel proud of our cousins who have done and are doing so much to signalize the sturdy stock from which they came, and we cheerfully embrace every opportunity for acknowledging our kinship and wishing them God-speed.

A Discourse on the Life and Character of Dr Richard Oswald Cowling. A Valedictory Address delivered to the Graduating Class of the University of Louisville, February 28, 1882. By DAVID W. YANDELL, M.D., Professor of Surgery, University of Louisville. Louisville: John P. Morton & Co., W. Main Street: 1882.

WE have read this tribute to the memory of an eminent surgeon, and a man evidently of rare parts and character, with much interest. If largely diffused among students and young practitioners, it might do a world of good by awakening lofty aspirations and setting before their eyes the image of one who, though hardly arrived at middle life, had done much to ennoble the profession on which they are entering. We cannot go into details; but it is gratifying to us, on this side the Atlantic, to learn that Dr Cowling, after studying engineering and then law, had his mind turned to medicine while convalescing from a severe illness, by a copy of Sir Thomas Watson's *Practice of Physic* falling into his hands. It seemed to come to him as a revelation. "Before that," says Dr Yandell, "it had not entered into his mind to conceive the beneficence, the splendours, the glories of the domain of medicine. He read and re-read the volume. Many of its finer passages he committed to memory, and in his subsequent career as a teacher and writer he quoted no author so frequently as he did Dr Watson."

His student life was very earnest and successful. He was one of those men who are ready at every turn to embrace opportunities of advancement, and he invariably showed at once that he was the right man in the right place. Born in 1839, he died in 1881, after crowding into his brief career an amount of valuable and finished work which would have done credit to men double his age. He died, after a rapid illness, of rheumatic pericarditis.

The following description of him by his admiring friend, Dr Yandell, does honour to the man who wrote it:—"In person Dr Cowling was commanding. He was tall, deep-chested, broad-shouldered, stout-limbed. His head was large, his face singularly benignant; his manner courteous, considerate, persuasive; his laugh cheery, mirth-provoking; his voice deep, manly; he led frankness, cheerfulness, and goodwill to dwell in his heart, and made duty its mistress. His mind was singularly judicial.

"As a surgeon, his bearing was sympathetic, his insight quick, his hand gentle, steady, and strong. A man of the times, he retained the dew of his youth. A man of the world, he preserved a simplicity and gentleness like to that of Elia. To humour, which rippled on the current of his life, warming and gladdening as sunshine all who came within its genial light, he added a wit which often dazzled but never stung; to truthfulness he added trust in others; to deep humility he added high courage; to that not uncommon charity which bid his servant, during bitter cold weather, 'leave the coal-house door unlocked, for a man must be poor and very miserable before he will steal a lump of coal,' he added that rarer charity which thought no evil. He added to knowledge wisdom. He was a Christian."

Sixteenth Annual Report of the Sanitary Commissioner with the Government of India, 1879. With Appendices and Returns of Sickness and Mortality among British Troops, Native Troops, and Prisoners in India. Calcutta: 1881.

Supplement to the Ninth Annual Report of the Local Government Board, 1879–80. Containing Report and Papers on the recent Progress of Levantine Plague and on Quarantine in the Red Sea. Eyre & Spottiswoode: 1881.

Annual Report by Medical Officer of Health of Newcastle-upon-Tyne.

Annual Report on the Health of Carlisle for 1880. By ROBERT ELLIOT, M.D., F.R.C.P.

SUBSTANTIAL contributions to sanitary progress are being recorded in many if not in every direction; and though the reports at the head of our list are too formidable in appearance, as well as too limited in interest, to attract the general reader, they represent an enormous amount of exact labour, yielding at the least a large supply of negative evidence. The Indian report states that all classes of the community seemed equally prone to the attack of the new disease resembling beri-beri which broke out in 1879 in Calcutta and surrounding villages, and Dr Macleod was "unable to fix upon any one condition or assemblage of conditions, personal or otherwise, peculiar to affected places." After the discussion of many pages of carefully collected facts and arguments relating to the cholera epidemic of 1879 in Northern India, the heading is reached, "The subsidence of the epidemic just as unaccountable as its rise."

Mr Netten Radcliffe's reports contain matter which is readable, and will be indispensable to those studying the subjects of plague and quarantine. The existence of plague we may forget at times, but quarantine we have always with us, somewhere or other, a source of very evident loss and vexation, and hence continually challenging proof of its medical efficacy as enforced in practice. Nowhere is it more frequent and annoying than in the Red Sea; but the medical difficulties are complicated there by the venality and stupidity of Eastern officials, and quite overshadowed by international political questions. Nor is something akin to "a most favoured nation" arrangement unknown even in Italy. We lately heard of an Indian friend, coming home *viâ* Italy, who escaped with a very short quarantine detention in that country by means of the simple expedient of shifting from the English to an Italian steamer at the canal.

English medical officers of health not exceptionally blessed with philosophical insight or imaginative power find it increasingly difficult to make their useful reports interesting to the general body of the profession or the public outside their own localities. That of Dr Armstrong of Newcastle-upon-Tyne is always remarkable for the plans and maps used to point out faults and suggest alterations and improvements.

Dr Elliot of Carlisle prefaces the usual statistics with an essay containing several novel and interesting statements. Experience gained while steadily and scrupulously carrying out isolation and fumigation in scarlet fever cases has led him to the conclusion "that not fewer than nine weeks must elapse before a convalescent should be allowed to associate with others who are liable to take scarlet fever." The infant mortality of Carlisle appears to be about 23·5 per cent. of the total mortality, and, curiously enough, Dr Elliot, as a loyal citizen, takes comfort as to the salubrity of his city from the fact, and rebukes "inexperienced people who may blunderingly disparage the health character of a district, and make even its trade suffer," by comments on the total death-rate. Does the essayist forget that infant life forms the most delicate test we have for health conditions? Under the title of "Carlisle Inspections" is described a custom which has greatly supported and aided the medical officer of health in the discharge of his duties, and has been attended with marked benefit to the health of the city. It consists in a triennial minute sanitary inspection carried on simultaneously in the different sections of the town by volunteer committees of citizens, who complete their visitation in a week and then report. The advantages of such popular action are obvious enough in cholera times to other places, but it might be well to imitate Carlisle and supplement and strengthen officials in this way more frequently. Notwithstanding the vicinity of Keighly and its guardians, Carlisle remains exempt from antivaccination error, an exemption which is "generally referred to the obvious action of the many reading-rooms *in the exclusive management of weekly wage men.*" Taking as his text sundry analyses, Dr Elliot concludes with a panegyric upon the water supply, which even so long ago as 1306 maintained a standard that impelled the Carlisle parliament of Edward I. to consider the pollution of the Thames.

THE BOSTON
SOCIETY FOR
MEDICAL
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Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXI.—MEETING IX.

Wednesday, 5th July 1882.—Mr JOSEPH BELL, *Vice-President, in the Chair.*

I. *The Vice-President* showed a man suffering from PARAFFIN EPITHELIOMA OF THE LEFT HAND, involving chiefly the structures lying over the metacarpal bone of the thumb. It might be within the recollection of the Society that some years previously he had shown them a similar case affecting the scrotum. That was the first case of the disease described and put on record. The patient he now showed was a fellow-servant and coeval with the man whose scrotum was then affected, the two being the oldest employés in the Addiewell oil-works. The case was an exceedingly characteristic one, and there was little doubt as to its local origin and the nature of the irritation which set it agoing. The disease seemed to have taken the place of the chimney-sweep's cancer, which was so common in the days before the Act prohibiting the employment of climbing-boys was passed. The present case might remind some of the members of a gardener who was reported a great many years ago with a soot-cancer of the hand, caused by the irritation of soot he used in manuring his garden. Of course a suitable nidus was required in order that the local irritation might produce a cancer.

II. *Dr Miller* showed a portion of INTUSSUSCEPTED BOWEL which he had removed from a child, æt. 11 months, that forenoon. The child was playing about quite well on the previous morning. It suddenly became unwell, and was seen at 8 P.M. Dr Miller was called in to consult on the following day, and diagnosed intussusception. At 4 P.M. he proceeded to operate, the state of matters being as follows:—The bowels were quite flaccid; a hard mass could be felt commencing close to the umbilicus, and passing down to the left side and sigmoid flexure. This could not be indented. It was evidently an intussusception. He examined per rectum, but nothing came away. He then began the operation under spray. An incision was made in the middle line large enough to admit the finger. This, passed into the abdomen, showed that the sigmoid flexure was empty, but the descending colon and apparently the left half of the transverse were occupied by the hard mass. The incision was then enlarged, and this portion of colon brought to light. It was filled with a dark-coloured mass that could be seen through the walls of the bowel. From this a small portion of ileum hung down. On trying to undo the intussusception he found that he could withdraw the bowel little more than an inch. He then attempted, by invaginating the finger into the colon, to push the bowel out, but failed. He then noticed that a portion of the ileum and colon were agglutinated. As this would not give way, the only thing to be done was to remove this portion of bowel, which consisted of caput cæcum coli, the whole of the ascending colon and a portion of ileum. The ileum was then stitched to the transverse colon. The bleeding was very slight. Before operation the child was semi-collapsed. Just after it, it collapsed entirely and died in about fifteen minutes. A glance at the preparation would show how much thickened the colon was. This must have greatly helped to grip the bowel and prevent its withdrawal.

III. *Dr Foulis* showed a bottle containing some ASCITIC FLUID removed from the abdomen of a lady with a malignant tumour of the ovary. He wished the Society to notice that there was in the fluid a flocculent deposit. During the last ten years he had examined some hundreds of fluids removed from the abdominal cavity. Often he had to decide whether a fluid sent for examination was *ascitic* or *ovarian*, or a mixture of both. A simple observation enabled him to do this. Although an ascitic fluid might be quite free from deposit when first drawn off from the abdomen, yet generally within forty-eight hours there appeared a flocculent deposit, such as he now showed. This deposit, when examined under the microscope, always consisted of extremely fine, glistening fibrillæ, sometimes running parallel to each other, but more often interlacing, like the fibres of a piece of felt. Such a deposit he had never seen in a simple ovarian fluid. This might appear a very simple and unimportant observation, but by it he had never failed to distinguish between ovarian and ascitic fluids. His explanation was that *ovarian* fluid was a *secretion* poured out by the cells lining ovarian cysts, but *ascitic* fluid was an *exudation* from the blood, and contained more or less fibrine, according to the amount of inflammatory action present. In the case of a mixture of ovarian and ascitic fluid the flocculent deposit always showed itself, but involved in the meshwork of fibrillæ there were always numerous cells from the burst ovarian cysts, which could be easily recognised.

IV. The *Vice-President* showed a CALCULUS which had been diagnosed as encysted before operation, and which turned out to be so. The patient, a middle-aged man, had been treated in both surgical and medical wards. There were all the symptoms of stone, but nothing could be felt by the sound. He then passed a small stone, and was somewhat relieved. He did not, however, get over all his symptoms. Frequent examinations were made, and at one of these the convexity of the staff grated on something just behind the prostate. The point, however, could not be brought to touch this. The prostate was not enlarged, but a stone could not be felt per rectum. It was then considered that if there was a stone it must be lying in a cyst behind the prostate. Preparations were made for its removal. Ordinary lithotomy was performed. The finger was passed into the bladder, and felt the stone lying in a cyst behind the prostate, as was supposed. It was tilted out of its position there by means of a sharp-angled scoop, and removed by forceps. Some days after the operation a little water passed by the rectum, showing that the cyst must have been close to it, and had to a slight extent given way. He trusted that healing would soon take place, and no permanent fistula be left. It might be thought strange that he did not feel the stone from the rectum. He could only say that after repeated examinations he could not be sure of it. The patient has gone home well.

V. *Dr Macgillivray* then read Dr Cadell's paper on CASES OF STRICTURE OF THE URETHRA, which appears at page 136 of this Journal.

The *Vice-President* said he could not help thinking that the perusal of this paper must show them that what Solly called the suppurative form of treatment was a most dangerous one. The more cases of stricture one saw, the more would he be inclined to trust to interrupted dilatation with the metal instrument, which had more effect on the submucous deposit than the elastic instrument.

Dr Miller was sorry that Dr Cadell was not present. It did not do to say too much about his paper in his absence, but there was one thing they could do, and that was to praise it. They were much indebted to him for bringing his experience before them. There were one or two points worthy of remark. One of these had already been referred to by the Vice-President under the title of the suppurative method of treatment. That was the system of tying in a catheter, and it was not at all conducive to the patient's comfort or advantage. With regard to Dr Cadell's remarks on Holt's operation, he would agree with him so far, that in those cases which did not readily submit themselves to the ordinary interrupted bougie treatment Holt's instrument did very well. He did not agree with him that it was necessary to dilate the stricture before Holting. Wherever the instrument, as modified by Watson (*i.e.*, made with a probe point), could be passed, the operation might be done. As to evil effects, he might say that he published some time ago a series of cases, in not one of which was there a bad result from the operation. One patient died a fortnight after it from obstruction of the bowels. The urethra was removed by himself and Professor Rutherford, and not a single scratch on the mucous membrane could be found. He believed that it was uninjured, there being no blood at the time of operation. One case of Dr Cadell's seemed to show that a stricture had occurred without a previous gonorrhœa. It struck him then what an amount of difference there was between gonorrhœa in the male and gonorrhœa in the female. He had seldom seen any harm from it occurring in his patients in the Lock wards. There were one or two cases of metritis and ovaritis that might have been due to it, but they were very few in comparison with the number affected with gonorrhœa. There was seldom a urethritis, but almost always a vaginitis.

VI. *Dr Gibson* read Dr Balfour's NOTE ON THE POSITION AND MECHANISM OF THE HÆMIC MURMUR, in reply to the paper of Dr Russell of Carlisle.

The *Vice-President* said the Society was much indebted to Dr Gibson for reading this learned and interesting paper of Dr Balfour's. They would be glad to hear Dr Russell in reply.

Dr Russell said that when he had the honour of making a communication on this subject some time ago, he did not expect that he would make a disciple of Dr Balfour, nor did he expect that he (Dr Balfour) would handle him lightly, because they all knew his hand was not a light one in such matters. He could scarcely reply at once to all that Dr Balfour had said against his theory, because Dr Balfour had had three months to prepare this paper, and bring up all the heaviest artillery he could command, and to this he could not immediately reply. As to the relative positions of the pulmonary artery and left auricle, as far as Sibson and Quain were right, the one was immediately behind the other, and his own observations led him to believe they were so placed that they could not be distended without pressing on each other. He was surprised that Dr Balfour should have misinterpreted his contention and the distinction he (Dr Russell) drew between the auricle and its appendix. Dr Balfour thought he (Dr Russell) was not familiar with the fact that the left auricle was dilated. He was familiar with that, and that the left auricle might be so distended as to compress a primary bronchus, but he held it was still to be proved that the left appendix was so dilated as to cause the murmur heard in the second and fourth interspaces. Dr Balfour said that if the left auricle caused the pressure on the artery which he maintained it did, the pulmonary circulation would be stopped, and so it would if the heart did not adapt itself to the circumstances. What he maintained was, that there was a rotatory movement of the heart to the left, by which the auricle was carried away from immediately behind the pulmonary artery, and in this way the circulation was enabled to go on. In cases of debility the auricle was not sufficiently displaced to remove it from its normal position behind the pulmonary artery, and therefore the pulmonary artery was compressed and a murmur thus produced. He did not know that he could take up any other points than these. There were several things that might be said in the matter, and Dr Balfour, he thought somewhat unnecessarily, pooh-poohed some of his observations, because it was not possible or necessary to enter fully into the records of post-mortem examination in such a paper to a society. He should, however, like to ask if Dr Balfour had seen many post-mortem examinations of cases of chlorosis? Such had not been his experience, and he hoped it never would, as he preferred to treat them in another way. He should like to know if Dr Balfour had seen many cases of debility where he had traced the murmur before death, as he (Dr Russell) had done, and if he had followed them to the post-mortem table, and in what way he had made his observations. He had previously taken the liberty of detailing how he had made his examinations by inspecting the heart *in situ* through the interspaces. It was no use cutting out the heart first to examine the cavities and measure the auricular appendix. What they wanted to know was, what parts were visible in the interspaces where pulsation was visible. He had not dissected more than one to two hundred bodies; but he had in that time taken great interest in Balfour's auricular murmur, and he maintained that the dilatation of the auricular appendix was not sufficient to produce the murmur, as Dr Balfour said it did. In one of his cases the auricular appendix was behind, so that he had to turn the heart right round to get a view of it. He had to thank the Society for their kindness in allowing him to reply.

Dr Gibson said it would not become him to throw himself between the combatants in this fray. He had already stated his acceptance of Dr Balfour's theory. All he would contend for was that tracings taken of the pulsation in the second left intercostal space gave no evidence of its being arterial, and he therefore thought it could not be due to the pulmonary artery nor to the conus arteriosus, as Dr Russell had suggested. He had been able to obtain tracings of the conus arteriosus pulsation in a case of split sternum, and these by no means corresponded with the pulsation got in cases of debility and chlorosis. Secondly, the pulsation agreed perfectly in rhythm with what one would expect from a regurgitant wave passing from ventricle to auricle.

The Vice-President thought the Society owed a debt of gratitude to Dr Russell for starting this discussion, and as Dr Balfour had taken three months to answer him, he had now an opportunity of taking three months to answer Dr Balfour.

The Vice-President then left the Chair, to read his paper ON A RARE FORM OF SENILE GANGRENE (which appears at page 141 of this Journal), Professor Struthers of Aberdeen being called to take his place.

Professor Struthers said he had to apologise to the Society for finding himself in the position he occupied. There was nothing he looked back on with greater pleasure than the meetings of their Society. The paper they had just heard reminded him of the days when Mr Bell was one of his prize students in his class at Surgeon's Hall.

VII. *Dr Foulis* gave a demonstration of the CIRCULATION IN THE WEB OF THE FROG'S FOOT, with oxy-hydrogen light.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING IX.

Wednesday, 10th May 1882.—Professor SIMPSON, *President, in the Chair.*

I. *The President* showed a FIBROUS POLYPUS of soft consistence which had been expelled in part from the uterus; but as the process was stopping, it had to be removed. This was done with the ecraseur, as the softness of the tumour prevented removal by torsion. He had recently removed, in another case, a similar tumour, which was of firm consistence, and was being slowly expelled. Such a firm tumour was easily removed by torsion. In the first case the tumour, after removal, could not be withdrawn through the narrow vaginal orifice; it had to be diminished by spiral incision.

II. A paper on FŒTID PARAMETRIC AND PERIMETRIC ABSCESS, by J. Matthews Duncan, M.D., London, and which has already appeared at page 961, vol. xxvii., of this Journal, was read by *Dr Playfair*. He explained that it was through a mistake that it had appeared in the Journal before being read to the Society.

The President said the Fellows were greatly indebted to Dr Matthews Duncan for this communication on what was a comparatively rare condition. With regard to fœtid pelvic abscesses, it was difficult both to trace the date of their becoming fœtid and to ascertain the source of the fœtor. Communication with the intestinal canal was not always the cause of the fœtor. When pus was discharged through the posterior fornix, it was sometimes fœtid from sloughing of large portions of tissue, such as the pelvic fascia. He had seen a case of abscess which opened first into the rectum and afterwards into the bladder, so that fæces passed per vesicam. The urine never passed per rectum, which seemed to imply that there was a valvular action allowing solid matter to pass in one direction but preventing fluid from passing through in the other. This abscess healed on the application of nitrate of silver to the fornix.

Dr Gordon said that abscesses in the perinæum have naturally a fœtid odour, even although they do not communicate with the bowel.

Dr Peter Young remarked on the fœtor of abscesses at the outlet of the vagina, and also in the tonsils. This was due to the absorption of gases. Butyric acid permeated the walls of an abscess. The condition of the pus in Dr Duncan's case might be due to absorption of gas through the walls of the bowel, and the communication with the bowel might have been produced post-mortem.

Dr Croom said that the fœtor of abscesses near the genitals and at the labia might be due to the access of air. In carcinoma of the fundus the discharge was less fœtid than in carcinoma of the cervix, probably because there was less access of air.

Dr Hart thought that the distinction made by Dr Matthews Duncan between a merely bad-smelling and a putrid abscess was important. He had seen a tonsilitic and also a sublingual abscess, each of which had a strong odour, but neither showed bacteria on microscopic examination. A bad odour was no proof of putrefaction. As to the cause of the patient's death, it was due to her getting too little instead of too much chloroform. He would like to see the woman who died from the administration of ʒiss. of chloroform.

Dr Church thought that the question of odour as a sign of putrefaction had an important bearing on antiseptic dressing. The presence of a bad odour, or even bacteria, was no proof that the wound might not be kept aseptic. He had used antiseptics in a psoas abscess which had a very bad smell; no symptoms of putrefaction followed. As to the transmission of odours, it was of physiological interest to note that the odour of substances inhaled by the lungs might appear in the flatus from the intestine.

Dr Barbour drew attention to the dilatation of the ureter and hydronephrosis which were present as the result of the exudation. This condition was often observed post-mortem in carcinoma. Uræmia from this condition was a not unfrequent cause of death. It had not been often described post-mortem as the result of inflammatory conditions.

III. The REPORT OF THE ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL for the quarter ending April 1882, which will appear in a future number of this Journal, was read by *Professor Simpson.*

Dr Peter Young thought the case of spontaneous evolution was of interest. He would like to know whether the arm which had first presented receded afterwards. He had seen a case of cephalhæmatoma in a child four years old. The child had fallen, and there had been a slight effusion of blood beneath the scalp and over the frontal bone on the left side, where the head had struck the ground. Two days after this the effusion increased considerably in extent, and on the *opposite* side of the head, over the posterior part of the right parietal bone, an effusion developed, which increased so that by the third or fourth day the child looked hydrocephalic. ℥ij. and ℥iss. respectively of blood were drawn off from these two effusions; in ten days they had almost disappeared.

THE BOSTON
SOCIETY FOR
MEDICAL
OBSERVATION

Part Fourth.

PERISCOPE.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

Abnormal Presentations recurring in three successive Pregnancies (*Archives de Tocologie,* May 1882).—Under this heading M. Bailly records the histories of three successive deliveries in which there was prolapse of the cord each time, and the presentations were two breech and one footling. The latter presentation occurred notwithstanding very persistent efforts to maintain presentation of the head by means of a Pinard's bandage worn during the latter months of pregnancy. As there was no pelvic deformity, the author refers this repeated abnormality in presentation to irregular formation of the uterus, in consequence of which the lower part was more capacious than the upper, and thus would accommodate more readily the larger pole of the ovum formed by the breech and reflected limbs than the fundus would. No attempt is made, however, to prove this opinion by actual measurements of the uterus.

In the same journal we observe a thoughtful article on the **Action of the Utero-Pelvic Muscles during Pregnancy and Labour,** by M. A. Thevenot.—By utero-pelvic muscles the author means two systems of muscular fasciculi, comprehending—1*st*, The system described by Boivin, Deville, Hélie, and Luschka. This system is in continuity with the longitudinal fibres of the body and neck, and gives origin to six principal bundles. Two of them leave the surface of the body and form the muscles of the round ligament, which are well known to accoucheurs. The four other bundles emanate from the longitudinal fibres of the isthmus and of the neck, and may be aptly called cervico-pelvic muscles. The two posterior bundles pass along the folds of Douglas, and proceed, after a long sweep, to be inserted into the second sacral vertebra, and even at times ascend as far as the fifth or fourth lumbar vertebra. The two anterior bundles, again, leave the body of the uterus below the insertion of the round ligaments, descend along the sides of the bladder, in which they lose some of their fibres, and ultimately are inserted into the posterior aspect of the symphysis pubis in the vesico-pubic folds. 2*nd*, The second system of fibres is almost completely independent of the uterine fibres. Very highly developed at the end of pregnancy, it is essentially constituted of a plane of subperitoneal transverse fibres, which cover the anterior and posterior aspects of the uterus, from which they travel between the folds of the broad ligaments, and ultimately are inserted into the pelvic walls. To the action of these muscles, whether simply from their tonicity or from active contractions taking place in them, the author traces the maintenance of the position of the uterus in the abdomen during pregnancy, and the descent of the head into the brim in primiparæ before the beginning of labour, as also the descent of the head to the floor of the pelvis during labour in certain cases. He endeavours to establish his views in regard to descent of the head into the pelvis during labour by reference to two observed cases.

Case I. refers to a secundipara, whose pregnancy was interrupted at the end of the eighth month by rupture of the membranes from a fall. The volume of the uterus was thus greatly diminished by the escape of the waters. On examination the cervix was found to be about an inch long, and the lower segment and the neck could be reached with difficulty. The patient was kept strictly in bed on her back till the third day, when the pains became sharp, and the head, covered by the lower segment, was made to approach the brim; then, under the influence of some strong contractions, in less than ten minutes the point of the ovoid descended deeply into the cavity of the pelvis.

Case II. was that of a lady at term. The bag of waters burst during sleep at 5 A.M. On examination at 8 A.M. the head could be felt in the left iliac fossa. The lower segment of the uterus and the partially effaced cervix could only be touched with difficulty. The contractions were feeble and painless. The patient was put in the dorsal decubitus and compelled to retain it whilst the head was pushed over the brim. At 9 o'clock the contractions became shorter and more numerous without becoming painful, and in less than two minutes the head descended into the cavity of the pelvis (the cervix not being, as yet, completely obliterated), and became arrested when situated in the pelvis, so that the distance from the steepest part of the summit of the head to the triangular ligament was 3 centimetres. No further progress was effected until the cervix was completely dilated.

The author argues as follows from these observations:—" Thus in these cases, the women being kept in the dorsal decubitus, respiration occurring regularly and without effort, the ovum being notably diminished in volume by the escape of the amniotic fluid, the descent was accomplished in a few minutes under the hand of the observer. What can be the cause of this movement? It is not gravity. Gravity in the dorsal decubitus can only keep the uterus applied against the vertebral column. It is not intra-abdominal pressure. The point of the ovoid engages at a time when there is a notable diminution of the volume of the ovum through escape of liquor amnii. It is not the contractions of the muscles in the abdominal wall and diaphragm, because the respiration never ceased to be regular, and there was no effort of any kind put forth. It is not the contractions of the uterine muscle. A spheroidal muscular pouch will change its form under the influence of contractions, but, be their intensity what it may, those changes in form will take place *in situ*. In one word, the contractions of the uterus could never impress upon the uterus a movement of translation. Yet this movement coincided with contractions that became more painful and frequent. If we consider both this circumstance and the rapidity with which the translation was effected, we must assuredly admit that a muscular force alone was able to produce it. We arrive, therefore, at this conclusion, that the agents in this movement are muscles which are inserted at one of their extremities in the uterus itself, and at the other in the bones or aponeurotic structures of the pelvis; that those muscles contract consentaneously with the uterus itself; that their contractions attain a minimum at the same time as the contraction of the uterus; that, in one word, these muscular bundles are emanations from or expansions of the uterus itself." It is to be noted that these observations were made upon patients who were scrupulously compelled to retain the dorsal position throughout the period of observation, so as to eliminate gravity and other complicating influences, and thus simplify the problem as much as possible. While referring the maintenance of the position of the uterus during pregnancy, and the descent of the head into the pelvis during the latter part of pregnancy, in primiparæ, as partly due to the tonic influence of the utero-pelvic muscles, the author does not consider them as the only influences, but agrees in the general view that abdominal muscles and other causes coincide in effecting that result.

ON THE DETERMINATION OF THE SEX IN GENERATION.—A curious contribution to this subject is contained in the May number of the *Philadelphia Medical and Surgical Reporter* by T. M. Harris, M.D. The author, after referring to the theory that the sexually determining force is found in the excess of sexual desire in the male or the female parent in the act of coition, proceeds to put that view to the test of experiment on animals. It has to be noted that the holders of the above theory maintain that if the sexual passion in the male is greater than that in the female the result will be a *female* offspring, and, on the other hand, if the sexual desire of the female is greater than that of the male at the time of conception the result will be the procreation of a male. The author states that he is a breeder of Jersey cattle; and as the males are in that class of animals of very little value comparatively, it is of great importance to be able to breed a large proportion of females. By keeping a large number of males, so as to make certain they should not be overworked, and keeping them at the same time in the very best condition, whilst they are not allowed near the female until she has passed the meridian of sexual excitement, Dr Harris imagines that he fulfils the conditions for securing the procreation of females, viz., that the sexual desire should at the time of coition be strong in the male and feeble in the female. He states that the result of his observations have, so far as he has gone, tended to support the theory above mentioned. [It is a pity the author gives no statistics.]

LABOUR SCENES AMONG RED INDIANS is the subject of an interesting communication by Dr Engelmann of St Louis in the *St Louis Courier of Medicine* for May 1882. It details some very curious practices, that are further made interesting by some curiously rude illustrations drawn by an Indian artist. The kneeling position appears to be that adopted most commonly by the Indian squaws. The chief assistance given seems to be grasping the abdomen in various ways, varied in bad cases by the incantations of the medicine man. The management of the placenta, in case it is slow to be expelled, consists in firm traction on the cord, aided by abdominal pressure and kneading. If these efforts fail, the woman is raised from the reclining to the erect position, and the uterine globe is firmly pressed and kneaded, whilst traction is continued on the cord. They seem to know of no method of treatment capable of delivering the placenta in cases of hour-glass contraction. During the puerperal period the practice differs considerably among the various tribes of Indians. In some of them the woman is kept on her feet the greater part of the day, aided, when walking, with a staff, the object being to facilitate the flow of the lochia. The Indians know that a certain amount of blood should escape, and think that if the patient lay down it would accumulate in the abdominal cavity and cause death. Among other tribes the puerperal patient is wrapped in blankets and placed on a bed near the fire if the weather is cool, and kept in this closely wrapped condition. Puerperal fever and eclampsia, so far as Dr Field could find out, were very rare among these people. Puerperal deaths appear also to be uncommon. The Indians tie the cord with one ligature, and cut it about a foot from the child's body. A strange oxytocic remedy is mentioned in the paper. In a case of slow labour the patient was brought out on the plain, and a noted chief of the clan, mounted on his swiftest steed, with all his war paint and equipments, charged down upon her full speed, turning aside only at the last moment, when the patient expected to be pierced through the body and trampled under foot. The alarm caused by this proceeding is stated to have caused the immediate expulsion of the child. On the first menstruation of a maiden the Indians hold a ceremonious festival to congratulate the maiden and her parents on the dawn of her womanhood. Some other curious customs are mentioned. The female stands to urinate and sits during defecation, whilst the male sits on his haunches to urinate and stands during defecation. The male mounts his horse from the right side, the female from the left. Among the Modocs and Klamoths the husband refrains from eating all flesh or game for five days after the birth of a child;

the mother does the same for ten days. At each menstrual period the woman refrains from flesh for five days, and is more or less isolated from the male portion of the family. Certain tribes demand that the father take to the woods and absent himself for some days from the family lodge and the encampment, and if it be the first child he hides himself until the child is a week old. It is satisfactory to know that only the young men are subjected to this treatment. At the end of this time, or as soon as the father is able, he calls all his friends together and has a feast of boiled dog, provided the child be a male.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

GRINDELIA ROBUSTA IN ASTHMA.—The *Grindelia robusta,* growing on the slopes of the west coast of America, which is used in those regions as the safest remedy against asthma, has of late attracted the attention of physicians in an increased degree. In favour of this new remedial plant, with reference to the therapeutic effects, it is claimed that the plant is not numbered among the narcotics, as the Solaneas (hyoscyamus, stramonium, etc.), which have been used heretofore, but that it comes from a family (Compositæ) which altogether furnishes us "hervica." The *Grindelia robusta* is, according to experience, the most effective species. The resin is an essential part of its effectiveness. Quantities of this resin, taken in proportion to the quantity of tobacco used, were employed to impregnate well-nitred tobacco, and from this cigarettes were formed, which, after long observations during several months, have always satisfactorily benefited those asthmatics who have used them. The use of these cigarettes, which are easily lit, and either smoked or the smoke of which is fanned towards the patient, is recommended by the author for every patient, even for non-smokers (ladies), as the cigarette, once lit, on account of the quantity of saltpetre with which it is impregnated, will continue to glow and develop smoke (Von Bombelon [Bergen auf Rügen], *Deutsche Med. Wochenschrift,* 1881).—*The Therapeutical Gazette,* May 1882.

CARBOLIC ACID IN THE TREATMENT OF CARBUNCLE.—Dr Charles Taylor, Medical Superintendent, Lunatic Asylum, Paramatta, N.S.W. (in the *Australian Medical Gazette* for December 1881), strongly recommends the injection of carbolic acid in the treatment of carbuncle. He says, "I have for some time in my practice discarded the use of the knife when treating cases of carbuncle, convinced that it is now unnecessary to inflict the severe pain of free crucial incisions in angry and highly inflamed tissues, and that the cure of the disease is hastened, if it be not at once arrested, by the use of carbolic acid. I have treated six typical cases of carbuncle, all seated about the nape of the neck, and all occurring in men of good bodily health and in good condition. Five of these cases were treated, within the first three days of their existence, by injecting pure carbolic acid into them. The sixth case had been submitted to free incision by my colleague before I used any acid to it. The result is that the five cases treated without incision rapidly recovered, and the other is now only closing in after dragging through the usual dilatory course of extensive sloughing and profuse suppuration. In those cases injected with carbolic acid the carbuncle appeared rapidly to put on altered and healthy action, laudable creamy pus was secreted, pain disappeared, and cases that would in all probability have lingered through two or three or more weeks of incision, pain, poulticing, and suppuration were happily terminated in a few days, leaving neither scar nor blemish behind." Dr Taylor injects into the carbuncle, by means of a hypodermic syringe, five or six drops of pure fluid carbolic acid. He recommends the skin of the surrounding region to be smeared with oil or cerate to protect it from the escharotic influence of any acid which may escape during the operation. He states that little or no pain is manifested when the acid enters the tumour. When the acid is discharged into the swollen part, the patient at once becomes comfortable, and experiences a glow of pleasing heat passing throughout it. The carbuncle either quickly "aborts," discharges a small quantity of pus, and ceases to trouble, or runs through a few days of active suppuration, secreting abundant and healthy pus, and speedily terminating. In all his cases he states that he has found one application of the acid sufficient, aided by the usual linseed-meal poultice, fomentation, and such constitutional remedies as the individual case may suggest, namely, active alterative aperients, quinine, iron, etc.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

A Case of Rupture of the Tympanum, with Paralysis of the Face.—A boy aged 7, who, eleven days before being seen, had, while playing at hide-and-seek on a first-floor landing, fallen over the railing of the stair, and had lighted on his head on the lobby floor below. He remained insensible for a little while, with a small quantity of blood issuing from his right ear; and when he had recovered consciousness his friends noticed that the right side of his face was motionless and baggy. For twenty-four hours after the accident he vomited everything taken; but after that the vomiting stopped, and, except the facial defect, nothing particular was noticed. When seen for the first time (eleven days after the fall) he presented a good picture of right-sided facial paralysis. He could neither wrinkle his brow nor frown on that side. He could not shut his right eye, the lower lid being depressed, while the upper was drawn up by the levator palpebrarum, which was unaffected. The eye was full of tears, which constantly trickled down the cheek. The nose was flattened on the right side, and its lumen narrowed. The right cheek was flaccid. The mouth was pulled to the left, and when he laughed he did so only on the left side of his face. He readily protruded his tongue in the median line. On inspection, the uvula was seen to be deflected to the left; and on phonation the soft palate was elevated towards the left side. The taste sensibility, as proved by touching each side of the tongue with alum, was decidedly inferior on the right side; and the patient stated that he did not taste his food so well on the right as on the left side. The hearing power for the watch was in the right ear $\frac{4}{36}$, on the left $\frac{36}{36}$, or normal. On examining with the ear-speculum the drumhead was seen to be drawn in, the malleus handle foreshortened, the short process prominent, while the long process of the incus and the incudo-stapedial articulation were plainly seen through the posterior quadrant of the membrane. In front of the manubrium a linear strip of blood-clot indicated the site of a rupture, and in the meatus there were lying a few crusts of dried blood. The Eustachian tube was easily pervious to inflation, and there was no perforation-hiss audible. On placing a vibrating tuning-fork on the vertex, it was heard much better in the left ear. Inflation did not improve the hearing. A blister was applied close to the ear and repeated after a fortnight, and the facial muscles were daily faradized during the first fifteen days; and after this three minims of liquor strychniæ were given thrice daily. Five weeks later, although no improvement occurred in the hearing, the facial paralysis was much better. The interest in the case centred in the probable site of the lesion. The impairment of taste pointed to implication of the chorda tympani. From the paralysis of the levator palati and azygos uvulæ, the portio dura was probably injured above the junction of the vidian nerve, while the deafness on this side was undoubtedly due to lesion of the auditory nerve. The foreshortening of the manubrium and retraction of the membrane were seemingly due to paralysis of the stapedius (which derived its nerve from the portio dura), whereby its antagonistic muscle (the tensor tympani, supplied by the fifth nerve) pulled in the malleus handle and so produced indrawing of the drumhead. There were no cerebral nor meningeal symptoms, nor those indicating lesion of the labyrinth, such as tinnitus, vertigo, or unsteadiness of gait, and no serous discharge, so that Dr Booth thought that all the indications pointed to an extravasation referred to that part of the canal where the seventh and eighth nerves lay together, and that the symptoms probably resulted from pressure on these structures owing to extravasation following the concussion.—*The British Medical Journal,* 11th June 1881, pages 922, 923.

Löwenberg, believing that furuncle and furunculosis are due to the appearance and multiplication of a parasitic photophyte, discards the use of emollients in treatment, as he believes that the development of the parasite is favoured by the heat and moisture which they induce. His plan of treatment is to lance a boil which has not already burst spontaneously, and he attempts in every case to make a free incision, and to follow up the course of the root-sheath. As the operation is a painful one, he induces first local anæsthesia by the ether spray or bromide of ether; after the incision a saturated in the cold aqueous solution of boracic acid is applied. He has found that when patients have refused to allow an incision to be made, a saturated solution of the salt, when applied, will often reduce the inflammation. [We have long employed carbolic oil 1 to 15. Applied to the furunculous meatus, it gives speedy and considerable relief even without the incision; but we open the boil when we can, thoroughly cleanse the meatus, using for that purpose a warm solution of sulpho-carbolate of soda with the syringe. After carefully drying with salicylic cotton-wool, we instil the heated carbolic oil. It cuts short the disease if diligently applied for three or four days.—J. J. K. D.]

THE WISDOM-TEETH AND DEAFNESS.—Dr Cooper reports several cases where he believes that the deafness owed its origin in each patient to a tardy or otherwise abnormal eruption of the wisdom-teeth. That the teeth are often the unsuspected cause of deafness he infers, firstly, " from the intimate sympathy existing between the teeth and the ears, and the consequent very obvious prejudicial effect of infantile dentition upon these organs; and, secondly, from observing the number of cases of deafness met with that date their initiation from the period of life at which these teeth appear." In the following case there seems to be some proof afforded that the condition of the teeth may be the veritable exciting cause of the morbid process in the ear:—H. W., aged 17, complained of intense earache, chiefly on the left side, with otorrhœa. Five weeks previous the pain had commenced, followed after two or three days by a discharge, and this condition had remained the same until he was first seen. The head was drawn to the left side, and the muscles of the neck became very stiff. The pain was like that of knives thrust into the ear and side of head, and both head and ear were sensitive to the least touch. On examination, the ear was very sensitive to pressure, but no inflammatory redness or swelling could be seen. Membrane extensively perforated, and handle of malleus protruding into the meatus and lying against its upper wall. At first the cause of all these symptoms was attributed to bathing alone, but an examination of the teeth showed a distinct elevated hardness underneath the gums of both lower jaws, all the more noticeable on the left side as he had lost two molars from this jaw. The symptoms began to grow worse. At night he had cold shiverings, with cold feet and hands. The head became very painful, even the weight of the hair unendurable; the pain in the ear shot down into the shoulder; the head became so drawn to one side that he had to support it with his hand, and he could not bear the least noise. The patient was first seen 11th October, and he continued better and worse till 16th November, when a right and left wisdom-tooth came through. The left gave severe pain when forcing its way through. After this all pain left the ear; and when an examination was made two days following, the discharge had ceased and the membrane had commenced to cicatrize. Several other cases are recorded by Cooper where there seemed to be a direct relationship between the wisdom-teeth and the pain and inflammation about the ear. The form of deafness which dates its inception to the period when the wisdom-teeth appear cannot be distinguished from the chronic otitis, as described by Toynbee as "rigidity of the mucous membrane of the tympanum." We must rely for the selection of a drug upon the symptoms of each case; but Politzer's inflation and catheterization of the tubes do no good, nor do blisters and intra-tympanic injections. The object of the paper is to show the importance of examining the teeth in each case where the cause of deafness seems obscure; for if the eruption of the wisdom-teeth can produce such morbid changes in the ear, a like injurious effect is presumable on behalf of carious teeth, painful stumps, or ill-fitting artificial plates.—Robert T. Cooper, M.D., Dublin, *Dublin Journal of Medical Sciences*, September 1881.

ON THE LYMPH-SPACES OF THE INNER EAR.—The conclusions of Hasse are thus given:—"The perilymph of the inner ear flows chiefly through a membranous, perhaps endothelial-lined, ductus perilymphaticus in the circuit of the jugular foramen into the peripheric lymph-system, which also receives the liquor cerebro-spinalis of the subarachnoid cavity and a small part of that from the subdural cavity through the porus acusticus internus. The liquor endolymphaticus finds exit through the arachnoid sheath of the acusticus into the subarachnoid cavity, and is probably increased by diffusion through the ductus endolymphaticus, and specially through its sacculus, from the epi- or endo-dural serous courses."—C. Hasse of Breslau, *Archiv für Ohrenheilkunde*, vol. xvii. p. 188.

THE USE OF CONSTITUTIONAL REMEDIES IN THE TREATMENT OF EAR DISEASES.—In a paper read before the Clinical Society of Maryland, Jan. 6, 1882, Dr Theobald deplores the manner in which aurists of the present day neglect internal medication, and attach the principal importance to local treatment in all ear diseases. He places mercury at the head of the list of remedial agents, and the ear affords a peculiarly favourable field for its action when inflammation has commenced, considering its minute anatomy, composed of mucous membrane and periosteum lining the tympanum and mastoid cells and the fibro-serous membrane of the labyrinth. He prefers the biniodide, with the addition of two grains of iodide of potassium to each grain of the biniodide of mercury, as it renders it freely soluble in water. He varies the dose from one-forty-eighth to one-eighth of a grain, according to the susceptibility of the patient and the nature of the malady. In deafness due to middle-ear changes he generally begins by prescribing one-thirty-second to one-twenty-fourth of a grain three times a day, to be taken after meals. If no appreciable improvement follows its administration in these doses, together with local treatment, which he never neglects, the dose is then increased to one-sixteenth or one-twelfth of a grain. He substitutes the bichloride when the biniodide seems to disagree, and also increases the iodide of potassium. The good effects of mercury seem to be especially manifest in that form of middle-ear catarrh in which the tendency is towards sclerosis and thickening. In specific or non-specific inflammation of the nervous apparatus of the ear the biniodide is the most valuable remedy, and in Ménière's disease better results are obtained from this remedy than from any other, even when uncomplicated by syphilis. In acute inflammation of the middle ear, purgative doses of calomel combined with rhubarb or rhubarb and scammony seem to produce the happiest effects; while in those cases of middle-ear disease where the periosteum becomes affected, and there is marked constitutional disturbance, with symptoms of cerebral irritation, we should bring the patient immediately under the influence of mercury (without, of course, neglecting the free application of leeches). This is best accomplished by administering at short intervals small doses of calomel, combined with opium if need be, and with occasional inunctions of the oleate. The same treatment is advocated for mastoid disease as in periostitis of the tympanum. The muriate of ammonia is recommended, in ten to fifteen grain doses, in the true or secretory form of middle-ear catarrh. The pyrophosphate of soda, in doses of ten to twenty grains every two or three hours, seems to have a beneficial effect on furuncles in the auditory canal and in acute suppurative inflammation of the middle ear. As to the efficacy of calcium sulphide, as recommended by Dr Sexton, the author has had but little experience, but when he has employed it he has found it beneficial. Dr Theobald's experience with arsenic (Fowler's solution) in eczema of the auricle and auditory canal leads him to look upon it with more favour than some authorities are disposed to regard it. He considers it applicable, however, only to the chronic forms of this affection. It is scarcely necessary to allude to the value of *tonics* in many affections of the ear. Dr Theobald calls attention to the excellent results which may be obtained from the phosphates of iron, quinine, and strychnine in combination in otorrhœa and in eczema of the external ear, especially when they occur in delicate children. The various remedies which have been suggested at different times for the relief of tinnitus, such as bromide of potassium, hydrobromic acid, ergot, belladonna, nitrite of amyl, etc., he regrets to say he has not obtained very decided results from any one of them. When this symptom is *solely* dependent upon hyperæmia of the labyrinthine vessels, the bromine combinations, and ergot especially, ought to exert a beneficial influence; in the more obstinate cases, however, this is in all probability not the usual, or at least not the sole cause, but there are others, such as anchylosis of the foot-plate of the stapes to the margin of the oval window, thickening of the membrane of the round window, etc., which, of course, are beyond the reach of such drugs. This same subject of constitutional treatment in aural diseases was brought prominently before the medical profession by Dr Sexton in a paper published in January 1879 in the *American Journal of Otology*, and recently in a paper read before the New York Academy of Medicine. He advocates the use of calcium sulphide in furuncles of the external auditory canal and in acute suppurative inflammation of the middle ear, and even where the inflammation has extended to the mastoid cells. This preparation of sulphur, if given early, generally will prevent the rupture of the drumhead; and he seldom has to resort to the harsher method of paracentesis and trephining the mastoid. He had discarded the use of leeches and the hot-water douche, relying simply on small doses of aconite to control the pain. There is a tendency upon the part of all specialists, whether medical or not, *to become too highly specialized.* In the specialist who devotes himself to the study and treatment of diseases of the ear, the otologist, this tendency is manifested most conspicuously in a disposition to *overestimate the value of purely local measures,* and to *underestimate the value of constitutional measures,* in the treatment of the maladies with which he has to contend. In calling attention to this shortcoming of his, I believe I have not done a work of supererogation.—Reprinted from the *Medical News* of 4th and 18th Feb. 1882, 8vo, pp. 16.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. Allan Jamieson, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

Cutaneous Diseases of Nervous Origin regarded from an Anatomico-Pathological and Clinical Point of View.—Leloir examines, in a carefully written article, the grounds on which certain skin diseases have been thought to owe their origin to affections of the nervous system. The dermatoses in which lesions of the nervous system have been established are leprosy, shingles, perforating ulcer, certain cases of vitiligo, of ichthyosis, of pemphigus, of ecthyma, of cutaneous gangrene, and of eczema. Zona has been actually demonstrated to be nearly always, if not always, a cutaneous affection of trophic origin, which may show itself as a sequela of diverse lesions of the nervous system. Can we go further, and range alongside it as trophic diseases other forms of herpes? With reference to this point, which still requires proof, Verneuil has published a case of chronic herpes preputialis cured by circumcision, where he found histologically cylindrical plexiform neuromata of the terminal nerve fibrils. The paper concludes thus: "The importance of an acquaintance with these cutaneous affections of neurotic origin, from the point of view of a rational treatment of skin diseases, cannot be overlooked. And though this rational treatment may be still enveloped in great obscurity, praiseworthy efforts have been made in this direction. On the other hand, the above-mentioned cutaneous lesions can in certain cases enable us to diagnose a nervous disease which otherwise would have passed unnoticed or been recognised too late. The treatment and the prognosis may be thus entirely modified. One ought also to inquire whether there does not exist, more or less concealed, some lesion of the central or peripheral nervous system in persons affected by those cutaneous disorders already alluded to."—*Revue des Sciences Medicales*, April 15, 1882.

THE TREATMENT OF ECZEMA.—R. M. Simon, in a somewhat sketchy paper, states his views on the nature and treatment of eczema. "On reviewing the literature of the subject it became painfully apparent that treatment had, as a rule, been haphazard, founded on no scientific basis, and pursued by individuals from chance or caprice. And surely this is not strange, for very few cases of eczema resist all treatment; its tendency is to recovery, and the successful remedy has been from time to time vaunted as a specific. Soothing, irritating drugs, internal treatment, lotions, powders, ointments, all have had their apostles, each believing in his gospel of cure." After this rather sweeping assertion we look for some sound and definite rules, and the following few grains may be gleaned:—One of the most difficult forms to treat, namely, that of dry eczema, or eczema associated with slight exudation about the fingers and palms of the hands, is almost invariably of gouty origin, and is always benefited by the use of iodide of potassium and colchicum. In acute eczema a lotion of two grains of acetate of lead and five minims of dilute hydrocyanic acid to the ounce of distilled water is recommended. Soft linen rags must be dipped in the lotion, applied to the part, and changed as often as they become dry. In chronic eczema of the head, where scabs have formed after their removal, the unguentum zinci oleatis is to be thickly plastered on to exclude air and prevent their reforming. The exclusion of air and avoidance of frequent washing are insisted on. Should this fail to cure, and the skin remain harsh, dry, and papular, then washing with Hebra's spiritus saponatus kalinus, and subsequent use of some hair-oil, or of a more stimulating ointment composed of equal parts of ung. picis and ung. zinci oleatis, may be employed. In eczema of the hairy parts of the face the hair is to be cut close and the crusts removed, and an ointment made of two parts of ung. hydrarg. nit. and six of sapo mollis diligently applied. This ointment serves to get rid of the infiltration; but Simon prefers, where patients will allow it, to cover the part with emplast. litharg.

B. P., allowing the piece put on to remain till it becomes loose. Simon holds the idea that a skin disease is often a safety-valve preventing a serious explosion. The paper concludes with some very trite deductions.—*Birmingham Medical Review*, May 1882.

AN UNUSUAL EFFECT OF SULPHIDE OF CALCIUM.—This salt has come much into vogue, in consequence of the encomiums passed on it by Ringer and others, as a remedy for pustular acne, boils, and various suppurative processes in the skin and glands. According to Ringer, it hastens the maturation of pustules already in process of formation, and checks the production of fresh ones. Alexander relates three cases where, without any evidence of suppurative action in the skin before taking the medicine, pustules of a highly inflammatory character became developed in the skin after it had been taken for several days, and recovery began in each of them immediately after the use of the agent was suspended. The number of instances is too small for arriving at positive conclusions, but the fact is worth bearing in mind.—*Archives of Dermatology*, January 1882.

CHRYSOPHANIC ACID INTERNALLY IN PSORIASIS.—The extreme dirtiness of chrysophanic acid or chrysarobin, when used externally as a remedy in psoriasis, has, along with other disadvantages, led many patients to object decidedly to employ it. Dr Napier has therefore made a decided advance in the therapeutics of this disease by showing that it can, in certain cases at least, be administered internally with satisfactory results. He was led to try it partly from observing, in some cases treated by Professor Charteris, that the eruption disappeared from both sides of the body though applied only to one, and that in some patients of his own the hair, formerly light, became perceptibly darker, though none of the acid had been put on the scalp. From this it appeared to him that the action of the acid must be due to its being absorbed into the system. This opinion was strengthened by the occurrence of various symptoms of constitutional nature which manifested themselves while the acid was being used externally. He has tried it in several cases, two of which remained under his care till cured or much relieved. The others were irregular in attendance, as dispensary patients with psoriasis are so notoriously known to be. Professor Charteris, also, has used it successfully in one instance. The acid is best prescribed in powder with sugar of milk, or in pill with bread-crumb. The dose, at first ½ of a grain thrice a day after meals, is to be cautiously increased. If sickness, vomiting, or other evidence of gastro-intestinal derangement show themselves, it must be again lessened. The eruption fades slowly and the patches become paler than the surrounding skin, just as when the acid is applied externally. He suggests that this action of chrysophanic acid may possibly be found to be due, as in the case of arsenic, to some special selective influence of the drug on the epidermis.—*Lancet*, May 20, 1882.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

A New Means of Diagnosing Unilateral Renal Disease.—I need only mention in passing, as being generally well known, the method of Tuchmann, Simon's catheterization of the ureters, and Hegar's ligature of the ureter from the vagina. By none of these are we guarded against unpleasant surprises during the course of the operation, or rather during the autopsy which soon follows it. A method, in cases where nephrotomy is thought necessary, by which the presence of active renal parenchyma on the presumedly normal side might be determined with ease and celerity, would certainly tend to favour the general extension of this salutary operation. I would suggest the following mode of procedure:—The morbid kidney is exposed by means of a small incision made in the usual position at the edge of the sacro-lumbalis muscle. The ureter is then isolated and its lumen temporarily obliterated either with a ligature or small clamp. If the ureter be double, both tubes, of course, must be closed. A solution of some salt which is rapidly excreted by the kidneys (potassium ferrocyanide, potassium iodide) is then injected subcutaneously, and its presence in the urine is, after a short time, ascertained by means of the ordinary tests. If the result of the chemical examination be negative, the temporary ligature is removed from the ureter, and the wound closed as after an ordinary exploratory incision. But should traces of the salt injected be found in the urine, we are assured that functionally active renal substance must still exist in the supposed normal kidney, and extirpation of the organ affected may be proceeded with. Two conditions may diminish the value of this test—1, For reasons easy to understand, a lecotropal kidney would not be diagnosed with certainty; and, 2, under peculiarly complicated anatomical conditions the isolation of the ureter might be attended with great difficulties. I believe, however, that the ureter will in general be easily secured, and that the method is worthy of trial in the class of cases referred to.—Th. Gluck, in *Centralb. f. Chirurgie.*

Remarks on Cases of Foreign Bodies in the External and Middle Ear treated in the Aural Klinik at Prague.—Out of a total of 4940 patients, foreign bodies, to the number altogether of 109, were observed in 100 cases. These, especially in children, were expansile bodies, such as beans and peas, or playthings, such as glass beads. The foreign bodies had remained in the ear for very various periods of time. In one case a cherry-stone had lain in the ear for forty-two years without producing any symptoms. Latterly cerumen collected, causing slight deafness, and the whole mass was evacuated by the use of the syringe. Extraction was, as a rule, easily effected when the syringe was *at once* brought to bear on the foreign body, and when the latter had not been driven further in by injudicious manipulation with unsuitable instruments. Such attempts often succeed merely in driving the foreign body into the tympanic cavity. Of the 109 bodies, 71 were removed by means of the syringe, the remainder with forceps, hooks, or spatulæ, when, through unskilful efforts at extraction, they had been driven, wholly or in part, into the middle ear. Had the syringe been used in time, all these foreign bodies might have been washed out, except one, a splinter of wood, which, boring into the membrana tympani, required instrumental extraction. If a body of this latter kind cannot be grasped or has escaped entirely into the tympanic cavity, I am inclined at once to separate the half or the whole of the membrana, with the exception of the *pars flaccida* (when the splinter does not involve the latter). The foreign body may then be dislodged by frequent air-douches and Eustachian syringing. Only one of the cases treated terminated fatally. In a few cases the outer segment of the seed had to be bored with a paracentesis needle, then a small double hook was applied, and half of the mass brought away; the other half was removed with a small forceps. In one case a bean in the left external canal had been pushed into the tympanum by incautious attempts at removal. The swollen seed was attacked with the galvano-cautery, and it soon shrivelled and came away. Other fruit-kernels had to be extracted with lever and curette. Previous injection of the thickest glycerine, or of a mixture composed of equal parts of ether and alcohol, was found to facilitate the operation by causing the foreign body to shrink. Both these fluids act antiseptically, and are thus well adapted to prepare the middle ear for any subsequent operative treatment (E. Zaufel, *Prager med. Wochensch.*)—A. Bidder, in *Centralblatt für Chirurgie.*

RESECTION OF CARCINOMATOUS LARGE INTESTINE.—The patient, aged 33, had been frequently under treatment for stenosis of the intestine (said to be the result of dysentery) situated in the region of the sigmoid flexure, where a firm cord-like swelling could be felt through the abdominal walls. At length the patient's symptoms became so urgent that immediate operation was resolved on. The abdomen was opened in the linea alba, the distended small intestines, wrapped in disinfected cloths, were drawn to one side, and the stricture, seated a little above the sigmoid flexure, was exposed. The affected intestine, drawn well forwards, was divided by a transverse incision immediately above the point of stricture, and a large quantity of very offensive, tenacious, fluid fæcal matter was evacuated; but in spite of this the distention of the small intestines was scarcely diminished. The gut was then punctured in several places with a trocar, the gas and fæces expressed, and the punctures closed with catgut sutures. The portion of intestine which had been drawn forward was then disinfected and replaced *in situ* above the stricture. The lower end of the colon was kept closed during the operation by the fingers of an assistant. Three inches of the strictured portion of the gut were then excised, and the upper tube was joined to the lower by means of Czerny's suture. The short mesentery was treated in a similar manner. The point of union was then fixed opposite the inferior extremity of the wound in the parietes, which was left unsutured in its inferior fourth. Finally a Lister's dressing was applied. Duration of the operation, three hours. On examination the stricture was found to be cancerous. A small stool was passed only a few hours after the operation; but on the eighth day, fæces and flatus escaping through the wound, the Lister's dressing was abandoned and open treatment adopted. Gradually the stools began to pass *per vias naturales*, and by April 19th, or fifty-four days after the operation, the patient was able to spend the greater part of the day out of bed, although for a month more there was an evening rise of temperature. The fistula at last healed under applications of the thermo-cautery and argenti nitras. On October 19th the patient was dismissed strong and well. Köhler considers that resection is preferable to colotomy in all cases where the disease has not extensively involved neighbouring structures, or where the patient's strength is not so reduced that this severe operation cannot be safely performed. Von Erckelen's researches show that life was prolonged in 62 per cent. of the published cases of colotomy; but, of course, the focus of disease was not thereby removed, and there was no thought of a radical cure. Such a cure is, however, much more likely after extirpation, for the growth rarely infects the lymphatic glands, and is but little prone to metastatic formation or recurrence. Besides, this method renders the objectionable artificial anus unnecessary. Up to the present time 18 out of 25 cases of completed resection of the large intestine have taken a favourable course. In three of these the disease has recurred with a fatal result; but the remaining 15, *i.e.*, 60 per cent. of all those operated upon, seem to be perfectly cured. As regards operative details, Köhler recommends that the abdominal incision be made in the linea alba, arrest of hæmorrhage being thus facilitated and a good view of the parts obtained. During the operation the divided end of the intestine is to be kept closed by the hand of an assistant, whilst, if possible, the piece to be resected and the adjacent healthy part are drawn beyond the abdominal wall, so that an escape of intestinal contents may not take place into the peritoneal cavity. Finally, he recommends that, as in the case above described, the sutured intestine should be fixed opposite the lower end of the wound in the abdomen (Köhler, *Inaug. Dis., Breslau*).—Richter, in *Centralblatt für Chirurgie.*

DEEP-SEATED BRANCHIAL CARCINOMA OF THE NECK.—In the course of the last ten years I have thrice found carcinoma deeply seated between the muscles in the anterior triangle of the neck. The growths had no connexion with the external integument nor with the pharyngeal mucosa, they did not arise from diseased lymphatic glands, and, in the absence of cancer formation in other parts, were presumedly primary in their character. The patients were men between 40 and 50 years of age. The tumour was once on the right, twice on the left side. In size they varied between that of a large plum and a child's fist. At first their consistence was invariably firm, scirrhous, but in one case that form of mucoid softening speedily set in which is so common in the secondary disease of the mandibular angle and parotid gland after facial and labial cancer. Thus a large fluctuating sac was formed, which, separating widely the larynx and large vessels, reached upwards to the basis cranii and produced great difficulty both in breathing and swallowing. But even at this stage the skin was not adherent to the tumour, and the mucous membrane of the pharynx, as in the other two cases, was healthy and movable. Though the attempt was made, it was found impossible to totally extirpate a growth so extensive. I had to be contented with laying the tumour open, evacuating its contents, and excising its anterior wall. At first the progress of the case seemed satisfactory; the swelling collapsed, and the dyspnœa diminished, but a sudden and severe hæmorrhage from the eroded carotid put an untimely end to the patient's life. Extirpation of the tumour was effected in the other cases. The growths lay between the larynx and hyoid bone internally and the great vessels externally, whilst they extended backwards as far as the mucous membrane of the pharynx and upwards to the styloid process. In both cases the operation was arduous and extensive, for the new formation had not only largely involved the neighbouring muscles, but was surrounded by the characteristic dense connective tissue induration. The great vessels were so closely adherent to the tumour that portions of the internal jugular vein had to be excised twice and the common carotid ligatured once. In both cases large masses of muscular tissue, including the sternomastoid, had to be removed. In neither case was the pharynx or the submaxillary gland involved. The cut surface of the fresh tumour had somewhat the appearance of a scirrhus-nodule from the mamma. The alveoli, with some of their contained cells undergoing fatty change, were visible to the naked eye. On microscopical examination the mass seemed on the whole epithelial in character, with numerous stratified nests (Kugeln) and papillæ, and large flat cells such as occur in cutaneous cancer. In parts the cells were columnar in shape. The stroma consisted of bands of dense fibrous tissue, whilst in the neighbourhood of the tumour there was an extensive small-cell infiltration. When we regard the position of these tumours (deep between the larynx, the hyoid bone, and the great vessels), the histological structure of which presupposes their development from some epithelial focus, the idea at once arises that they are homologous with the deep-seated atheromatous tumours of the neck, and that they arise from some deeply-seated epithelial germ whose growth has been arrested at the time of the obliteration of the branchial clefts, and which, after a long period of rest, is recalled to a state of active growth by some unknown irritant. I have therefore no hesitation in applying the term *branchial* to this form of cancerous growth, and in adding to the branchial cervical cysts (Roser, Schede) and the branchial chondromata and chondro-sarcomata of the submaxillary, parotid, malar, and auricular regions (Max Schultze, Lücke) this third form.—R. Volkmann, in *Centralblatt für Chirurgie.*

Part Fifth.

MEDICAL NEWS.

On Monday, July 17, the Curators of the University of Edinburgh elected Dr John Chiene to the Chair of Surgery, vacated by the death of Professor Spence. The other candidates were, Drs Heron Watson, Duncan, and Joseph Bell.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine on the 6th of July, and were admitted L.R.C.P. Ed.:—George Alfred Rae, Portland, Dorset; Andrew Fuller, Wolverhampton; William Thomas, Beaumaris; Charles Donkin, Weybridge, Surrey; Thomas English, Canterbury; Herbert Chaworth Hallowes, Chesterfield, Derbyshire; Thomas Thomson, Glamorgan, S. Wales; Henry Edward Haycock, Shrewsbury; William Henry Evans, Seaton, Devon; Robert Newton Clements, Loughboro', Leicestershire; George Henry Phillips, Midhurst, Sussex.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held on the 14th and 15th July 1882, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Cornelius Buckley, Mallow, Co. Cork; William James Brown, Edinburgh; John Charles King, Galway, Ireland; James William Delaney, London; Edward Ellis, Leeds; James Henry Rodgers, Edinburgh; Thomas Ernest Gee, Hoxton, London; Edwin Simpson, Dublin; Adolphe William Ottmann, Edinburgh, Gerald Barry Wilson, Cork; John Saunders Graham, Belfast; James Warburton, Edinburgh.

Royal College of Surgeons, Edinburgh.—The following gentlemen passed their final examination for the qualification in Surgery at the sittings held on the 21st and 22nd July 1882, and were admitted L.R.C.S. Ed.:—John White, Newburgh, Fife; David Donald, Innellan; Frederick Albert Heslop, Southport; David Hugo Daniell, Fulham, London; Edward Cooper Fenoulhet, Shepherd's Bush, London, W.; John George Duncan, Ipswich, Suffolk; Frederic George Haworth, Southport, Lancashire; Elmes Steele, Edinburgh; John Carruthers, Kilwinning, Ayrshire.

A Remarkable Case of Recovery after Injury to the Head. By John Drysdale, M.D.—On Wednesday, 4th January, I was called to see a man who had received a frightful injury from a circular saw. I found him suffering from a wound in the scalp measuring six inches in length, which traversed the head diagonally from a point about two inches in front of the right ear to a point about the same distance behind the left. On further examination I found a gap in the skull measuring three and a half inches in length by a quarter inch in width. That is to say, a portion of the skull measuring three and a half inches by a quarter inch had been carried away by the saw. I drew my forefinger along the gap and satisfied myself that it extended into the cranial cavity. As I felt certain that the case would soon end fatally, I did not consider it judicious or necessary to explore further, determining (as I happen to be coroner for the district) to hold an inquest and order a post-mortem examination. I then drew the edges of the scalp together with three strips of common adhesive plaster, and covered the whole with a large piece of lint soaked in tinct. benzoin. co. After bandaging his head pretty tightly I left, giving orders that he should be carried home. His pulse at this time was very feeble, but otherwise he showed no symptoms of collapse. I ascertained afterwards that he rallied so far as to walk to his house, a distance of nearly a quarter of a mile; this he insisted on doing, being afraid to alarm his wife. Two or three hours afterwards I saw him, and found him much improved. Pulse stronger, about 90; temperature normal. I ordered him to stay in bed, to be very careful in his movements, and to be put on farinaceous diet. I saw him every day afterwards for about a fortnight, during which I continued the foregoing regimen, and ordered one or two doses of Epsom salts. As there was no uneasiness or appearance of suppuration, and the pulse and temperature were quite normal, I did not disturb the dressing of the wound. After this I visited him every alternate day until Saturday, 28th January, when I removed the bandage, but did not disturb the lint or plaster. The latter I proposed to remove on Wednesday, 1st February. However, on the previous day I received intimation that the dressing had dropped off of itself. On visiting him I found the wound perfectly cicatrized, but of course presenting the deep gap in the skull, almost as distinct as when the wound was open. There was not the slightest trace of pus on the lint, the wound having evidently healed by the first intention. This is a most interesting, and I think unique case, as, although I find many curious cases recorded of compound fracture of the skull, this would appear to be the first where a man has had his skull "sawn" through.[1] In conclusion, the only merit I can obtain in connexion with the case is that, finding things progressing satisfactorily, I avoided the *nimia diligentia medicorum*, and allowed nature to have a chance. *P.S.*—On looking over the foregoing, I find I have omitted to mention four important facts, the last three of which at least were each highly conducive to recovery, viz.—1st, The patient is about forty-five years of age. 2nd, His head is perfectly bald, "as smooth as a billiard ball." 3rd, He has always been a man of singularly temperate and regular habits. 4th, He is a man of a most placid disposition, and of an exceptionally unexcitable and phlegmatic temperament.—*Australian Medical Journal.*

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[1] We remember a boy admitted into the Melbourne Hospital, under the care of Mr Fitzgerald, in whom a large piece of the vertex of the cranium had been cleanly cut away by a steam plane or graving instrument. The edges of the superficial wound were brought together, a leaden shield applied over the dressings, and the boy recovered without a bad symptom.

ATTEMPTED ASSASSINATION OF DR JOHN P. GRAY.—On the evening of 16th March, Dr John P. Gray, Superintendent of the New York State Lunatic Asylum, and Editor-in-chief of the *American Journal of Insanity*, was made the victim of a murderous assault in his office in the asylum, by a citizen of Utica named Henry Remshaw. Dr Gray, who had reached the asylum but an hour previously from Washington, where for several days he had been in consultation with U.S. District Attorney, Hon. George B. Corkhill, over the medical portion of the bill of exceptions in the case of the Government *v.* Charles J. Guiteau, was sitting in the superintendent's office in the centre building of the asylum, conversing with the Rev. Dr Gibson, the chaplain, Dr Blumer, one of the medical staff of the asylum, and his son, Mr John P. Gray, Jr., when suddenly the would-be assassin, who had entered the building unannounced, stepped into the doorway, which stood open, raised a large navy revolver, took a hasty aim at the Doctor's head, and fired. He then turned and left the building by the front door, and, being followed by Dr Blumer and Dr Gray's son John, stopped when a short distance down the lawn and again fired, but without doing any damage, and then disappeared in the darkness. Fortunately the appearance of the man's form in the doorway attracted Dr Gray's attention as he sat leaning over the table, so that he raised his head, turning his face toward the door, otherwise it is probable that the bullet would have crashed through the brain. It struck the face over the left malar bone, about one half-inch below the external canthus of the eye, passed diagonally downward through the face, and emerged in the centre of the right cheek two and one-half inches below the external canthus of the right eye, and about half an inch back of a vertical line dropped from that point, making a track through the face of five and one-half inches. In its passage the ball fortunately did no injury to the bony structures. In passing under the nose it went above the anterior nasal spine of the superior maxillary, opening the floor of the left nostril, and driving a portion of the septum into the right nostril. The nasal and labial branches of the superior maxillary nerve were injured in the passage of the bullet, and there was at first complete anæsthesia of the left side of the nose and the left side of the upper lip, with some hyperæsthesia of the right side of the upper lip, with almost complete motor paralysis of the whole lip. So closely was the pistol held to the head that the left side of the face was filled with powder. Fortunately no serious injury to the eye resulted. The hæmorrhage was at first quite profuse, but in a short time began to subside, and ceased entirely in about four hours. Swelling and infiltration were immediate and extensive, and within a very few minutes of the reception of the wound it was almost impossible to separate the left eyelids, and before midnight the right eye was closed and the face distorted beyond recognition. There was no shock, the pulse ranged between 80 and 90, and the Doctor exhibited perfect self-possession. Within forty-eight hours the swelling began to subside under the constant application of iced cloths. There was no interference by probing. There was a very slight inflammatory action, and no suppuration. The Doctor bore the severe pain without anodynes. He was sustained by frequent administration of broths, with stimulants and quinine. It was deemed best while his strength was thus well sustained to interfere with nature as little as possible beyond the measures already indicated. The track of the ball through both cheeks united by first intention, and the injury to the nasal passages has nearly healed by granulation, so that we look with confidence to a successful result. The favourable progress of the case from the first was undoubtedly largely aided by the coolness, fortitude, and self-possession which Dr Gray manifested throughout. The assailant crossed into Deerfield, an adjoining town, to his brother's-in-law, where he called for two glasses of ale and said he was going to New York. He afterwards went to the jail, where he gave himself up. When searched there was found upon his person four revolvers, a single-barrelled derringer, a dirk knife, and over two hundred cartridges. He was indicted by the grand jury, arrainged before the court on 25th March, and through counsel assigned by the court put in a general plea of insanity. On the 27th he was again brought before the court, and the Hon. Wm. H. Bright of Utica, Dr Carlos F. MacDonald of the State Asylum for Insane Criminals at Auburn, and Dr Thomas M. Flandrau of Rome, N.Y., were appointed a commission to examine into his mental state and report to the court. Dr Gray's only knowledge of or connexion with his assailant was while Remshaw was employed as a manipulator at a Turkish bath in the city.—*American Journal of Insanity*, April 1882. Since 1st April Dr Gray has continued to convalesce steadily. The infiltration of the left lower eyelid and the injection of the eye subsided more slowly than in any other part. There was paralysis of the lower lid, which disappeared at the end of six weeks. Sensation began to appear in the left upper lip during the fifth week, and at the same time the hyperæsthesia of the right began to subside, and in respect of sensation the lip is now nearly normal. The motor paralysis has almost disappeared on the left side of the lip, but still continues to a considerable degree on the right. The portion of the septum of the nose which had been forced into the right nostril, but not completely torn away, was replaced and has now healed, and the opening on the floor of the nostril is closed. The swelling along the track of the ball through the cheeks has not wholly subsided, but is steadily lessening. For the past few weeks the Doctor has been up and about his apartments a good part of each day, has slept reasonably well, has been gaining in colour and strength, and within a few days he has ridden out, so that we feel his ultimate complete convalescence is assured. The commission appointed in the case of Remshaw, the assailant, has reached the conclusion, and reported to the court that he is at the present time insane, and he has been sent to the State Asylum for Insane Criminals.

W. H. SCHIEFFELIN & CO.'S SOLUBLE PILLS AND GRANULES (New York).—We have been favoured with a case containing one dozen bottles of these pills and granules, and we have no hesitation in highly commending them to the notice of the profession. The pills are perfectly globular, and finished with a beautiful nicety surpassing anything we have before witnessed. They are covered with a thin, transparent coating, which is perfectly tasteless and easily soluble in the mouth or stomach. This coating is so thin that it does not add materially to the bulk of the pill, and, being transparent, discloses to the eye the exact colour and appearance of the pill-masses, and thus tends in no small degree to prevent one pill being mistaken for another. This coating appears to be quite sufficient to protect the pills from atmospheric influences, and to preserve the soluble condition of the mass. All pills should be sufficiently consistent to maintain their globular form, and yet sufficiently soft to melt in the stomach. These two conditions are possessed in a remarkable degree by Schieffelin's pills and granules. Another excellent property possessed by many of these pills is their small size, many of them being *very small*, such as those containing morphia, digitalin, etc. They prepare a pill containing "ergotin," their 3-grain pill representing 15 to 17 grains of ergot. This pill is a valuable addition to our armamentarium. The firm of W. H. Schieffelin & Co. of New York holds the highest place among American pharmaceutical chemists, and consequently the quality and quantity of the various ingredients can be perfectly relied on. The price of the pills is very moderate, and quite within the reach of the great majority of patients. The case was accompanied with a "Formula List, with Notes," giving the composition of each pill and the price. For perfection of finish these pills excel any pills we have ever seen, and we believe they require only to be known to the profession to be extensively prescribed.

OBITUARY.

THE LATE DR GEORGE HAMILTON.

ON 8th July occurred the death of one who has for a period almost beyond the recollection of the present generation been a prominent and highly respected citizen of Falkirk. Always moving about, always active, and always cheerful, few men were better known and better liked than him whom we have now to call the late Dr Hamilton. He had been gifted by nature with a remarkably strong and wiry constitution, and he was a man who had worked hard all his life, yet had always taken care of himself, so that he bore his years lightly and never seemed to get any older. He has so long been known as an uncommonly vigorous old man, that many may now be surprised to learn that after all he was only touching on the fourscore years which the Psalmist has set as the limit of human existence. Dr Hamilton was born in Edinburgh in December 1802. He was educated at the High School there, where he must have had many men who have since made their mark in the country as his schoolfellows. He received his professional education at Edinburgh University, and there took his degree as Doctor of Medicine. He settled in Falkirk in 1833, not long after graduating, so that he has been among us for nearly halt a century. He very soon got into extensive practice, not only in the town, but in the whole of the surrounding district—a practice which gradually improved, and which he was able actively to attend to without assistance till he was prostrated by his last illness about ten days before his death. He was medical attendant to the Plean Asylum and to many of the large public works in the district; and, as evidence of the fact that he retained his mental and bodily vigour to the last, it may be mentioned that about a year ago he was appointed physician to the National Imbecile Institution at Larbert. In the obstetric branch of his profession he was particularly successful. He had, moreover, a thorough knowledge of surgery, and had always a cool head and a steady hand, so that the number of difficult and delicate surgical operations which he has performed successfully may be counted by the hundred. It may be mentioned, also, that he was inspector for this district under the Factory Acts, and that he performed in a thoroughly satisfactory way the duties thus imposed on him of seeing that the restrictions imposed by these Acts on the employment of women and children were conformed to.

Dr Hamilton had a very ready pen. His style was clear and easy, and composition was to him no labour. He was a constant contributor to the Edinburgh Medical Journals, and his articles were always distinguished by originality of thought and boldness of speculation. So lately as April 1881 we noticed in our columns an interesting article by him, suggesting the inhalation of "peat reek" as a cure for consumption. But his literary efforts were by no means confined to purely professional topics. He was the author of not a few educational works, among which a treatise on the *Steam Engine and its Inventors* is probably the best known. He wrote an interesting little book on *Animal Physiology* for Chambers's Educational Series, and a volume on cookery for *Chambers's Information for the People.* He wrote also on geology, and on many other scientific but not purely medical subjects, and, indeed, his writings betokened a singularly versatile and well-stored mind.

During Dr Hamilton's long and active career he succeeded in establishing a high and wide professional reputation, especially for his earnest and able advocacy in favour of the more frequent use of the midwifery forceps in ordinary labours than obstetric practitioners were wont to consider either necessary or safe. From the time he first published his advanced views on this practically important point, viz., in 1853, he continued to speak and to write, as he could always so well do, with remarkable energy of purpose, in regard to a matter as to which his conviction had evidently become settled on the grounds of personal observation and direct experience. The writer of this reference to Dr Hamilton's extreme opinion regarding the early and free use of forceps has frequently listened to his forcible urgings, and enjoyed the privilege of discussing the *pros* and battling with him the *cons* of his conscientiously adopted practice, the comparative advantages of which, alike to mother, child, and attendant, he on all occasions so enthusiastically, because believingly, demonstrated. Although we have not as yet been convinced that there is either safety or necessity in the obstetric gospel which teaches and practises that nature requires, and therefore ought, to be instrumentally assisted at least once in every six, and even in about every fourth of her efforts to unburden herself, Dr Hamilton's precepts and example are now, doubtless, gaining ground, as would appear especially from the reports of discussions on this special forceps question in our obstetrical societies and elsewhere. But be that as it may, it cannot for a moment be doubted that our old and now late friend Dr Hamilton (whose early promise of an honourable and successful professional career was known to us, along with his excellent brother Alexander, nearly half a century ago) has in this matter, as in others, done good service by proving, practically as well as statistically, that the instrument which was invented to safely expedite the happy delivery of women can be used with more freedom and with much greater frequency than heretofore, if only cautiously introduced and properly manipulated,—a great step in advance, which the late Dr Hamilton's clearheadedness and proved manual dexterity have gone very far to promote.

The Doctor took a keen interest in politics. In him the Liberal party in Falkirk has lost a consistent and able supporter. He took an active part in every burgh election, and in the old days of public nominations from the hustings he was constantly to be seen proposing or seconding the Liberal candidate. He was, however, by no means a Radical. We should rather class him as a Whig, or a Liberal of 1832. His opinions were formed in the reform days, and he permanently allied himself with what was then the party of progress, though he must have felt as very strange much of the theory and practice of what is now called the Liberal party. Dr Hamilton was not at all bigoted, and had probably as many friends on the one side of politics as on the other, and there was nothing he enjoyed more than a good argument with a political opponent.

He held himself rather aloof from the movement made last year to take the conduct of the elections out of the hands of the electors and put it under a committee formed in faint imitation of the Birmingham model, and he attended none of the meetings held for that purpose, though he was ultimately, in consideration of his services to the party, appointed an honorary office-bearer of the association. He attended a meeting held last summer for the purpose of hearing Mr Ramsay's explanations of his having voted against the Government on some of the clauses of the Irish Land Bill, and Dr Hamilton expressed very decided dissent from the theory that the burgh member was bound to vote for everything the Government might choose to propose.

Dr Hamilton has earned the gratitude of all classes of the community by his sustained and successful efforts to keep the Falkirk School of Arts in life and vigour. He was appointed secretary to that institution so long ago as 1834, and he has ever since and almost up to the last days of his life taken a leading part in its management, while in its earlier days he was himself a frequent lecturer on such subjects as mineralogy, etc. Without at all depreciating the efforts of the many zealous fellow-labourers he has had, we may safely say that the Falkirk public to a great extent owe to him the instructive amusement and amusing instruction which the School of Arts has provided for thousands. His efforts in this respect have more than once been publicly acknowledged by the presentation to him of handsome testimonials.

The fact that he was extremely vigorous for a man of his years has already been referred to, and he was able to attend to all his arduous duties up to about a fortnight ago, when he was attended by an illness, which to a younger man might not have been serious, but which he was unable to throw off. He died at his residence, the Old Manse, on Tuesday night. Dr Hamilton is survived by his widow and a family of three sons and four daughters. He was singularly happy in his domestic relations, and has had the felicity of seeing his sons growing up and worthily following their father's footsteps. They have all adopted the medical profession. Dr Alexander Hamilton is now in extensive practice at Ashton, near Manchester. Dr David Hamilton, his second son, has chosen to be a scientific rather than a practising physician, and has already earned for himself a very high reputation. He is now Professor of Pathology at the University of Aberdeen. The youngest son, after completing a distinguished University career at Edinburgh, has got an important appointment in a Liverpool hospital. We can assure the family that in their bereavement they have the heartfelt sympathy of a very large circle of friends as well as of the general public of East Stirlingshire.

[The above excellent notice of Dr Hamilton has, with the exception of the professional part of it, been taken from the columns of the *Falkirk Herald*.—Ed. *E. M. J.*]

PUBLICATIONS RECEIVED.

William Aitken, M.D., F.R.S.,—Outlines of the Science and Practice of Medicine. Charles Griffin & Co., Lond., 1882.

Alexander Wynter Blyth, M.R.C.S., F.C.S.,etc.,—Foods: their Composition and Analysis. Chas. Griffin &Co., Lond., 1882.

Dr Bourneville,—L'Année Médicale. E. Plon et Cie., Paris, 1882.

W. Braithwaite, M.D., and James Braithwaite, M.D.,—The Retrospect of Medicine. Vol. lxxxv. Simpkin, Marshall, & Co., Lond., 1882.

G. H. Brandt, M.D.,—The Arsenical Springs at La Bourboule, Auvergne. H. K. Lewis, London, 1882.

L. Duncan Bulkley, A.M., M.D.,—Manual of Diseases of the Skin. J. & A. Churchill, Lond., 1882.

Dr Ad. Burggraeve,—New Handbook of Dosimetric Therapeutics. David Bogue, Lond., 1882.

H. T. Butlin, F.R.C.S.,—Sarcoma and Carcinoma. J. & A. Churchill, Lond., 1882.

Thomas Buzzard, M.D. Lond.,—Clinical Lectures on Diseases of the Nervous System. J. & A. Churchill, Lond., 1882.

Professor John Clay,—On the Treatment of Cancer. J. & A. Churchill, Lond., 1882.

J. Leonard Corning, M.D.,—Carotid Compression and Brain Rest. A. S. F. Randolph & Co., New York, 1882.

John C. Dalton, M.D.,—A Treatise on Human Physiology. J. & A. Churchill, Lond., 1882.

Geo. Henry Fox and F. R. Sturgis,—The Illustrated Quarterly of Medicine and Surgery. E. B. Treat, New York, 1882.

Vincent Harris, M.D.,and D'Arcy Power, M.A.,—Manual for the Physiological Laboratory. Baillière, Tindall, & Cox, Lond., 1882.

W. Bevan Lewis, L.R.C.P.,—The Human Brain. J. & A. Churchill, Lond., 1882.

W. J. Little, M.D., F.R.C.P.,—Medical and Surgical Aspects of In-knee. Longmans, Green, & Co., Lond., 1882.

Fred. W. Lowndes, M.R.C.S. Eng.,—Lock Hospitals and Lock Wards in General Hospitals. J. & A. Churchill, Lond., 1882.

Dr A. Luton,—Etudes de Thérapeutique générale et spéciale. J. B. Baillière et Fils, Paris, 1882.

D. M'Alpine, F.C.S.,—The Botanical Atlas. Parts I., II., III. W. & A. K. Johnston, Edin., 1882.

Medical and Surgical Reports of the City Hospital of the City of Boston.

J. Forsyth Meigs, M.D., and Wm. Pepper, M.D., LL.D.,—A Practical Treatise on the Diseases of Children. H. K. Lewis, Lond., 1882.

Dr Albert Mooren,—Fünf Lustren Ophthalmologischer Wirksamkeit. J. F. Bergmann, Wiesbaden, 1882.

George Moseley, F.R.C.S., etc.,—Eastbourne as a Residence for Invalids and Winter Resort. J. & A. Churchill, Lond., 1882.

Richard Neale, M.D. Lond.,—The Medical Digest. Ledger, Smith, & Co, Lond., 1882.

Edward Nettleship, F.R.C.S.,—The Student's Guide to Diseases of the Eye. J. & A. Churchill, Lond., 1882.

New Sydenham Society's Lexicon of Medicine and the Allied Sciences. Part VI. The Society, Lond., 1882.

Richard Norris, M.D., F.R.S.E.,—Physiology and Pathology of the Blood. Smith, Elder, & Co., London, 1882.

Richard Owen, C.B., M.D., F.R.S.,—Experimental Physiology. Longmans, Green, & Co., Lond., 1882.

Papers and Proceedings of the National Association for the Protection of the Insane and the Prevention of Insanity. G. P. Putnam's Sons, New York, 1882.

John B. Roberts, A.M., M.D.,—Paracentesis of the Pericardium. J. B. Lippincott & Co., Philadelphia, 1880.

Dr S. Robinski,—Du Développement du Typhus Exanthématique. J. B. Baillière, et Fils, Paris, 1882.

Tom Robinson, M.D., etc.,—Etiology, Pathology, and Treatment of Baldness and Grayness. Henry Kimpton, Lond., 1882.

William Shepperson,—The Medical Man's Handy Book. J. & A. Churchill, Lond., 1882.

E. Noble Smith, F.R.C.S. Ed., L.R.C.P. Lond., etc.,—The Surgery of Deformities. Smith, Elder, & Co., Lond., 1882.

Henry Smith, F.R.C.S.,—The Surgery of the Rectum. J. & A. Churchill, Lond., 1882.

James Spence, F.R.S.E.,—Lectures on Surgery. Vol. ii. A. & C. Black, Edinburgh, 1882.

A. Stadfeldt, M.D.,—Forelæsninger om Svangerskabets Patologi. C. A. Reitzels Forlag, Kjobenhavn, 1882.

W. E. Stevenson, M.B., M.R.C.S. Eng.,—Spasmodic Asthma. Deighton, Bell, & Co., Cambridge, 1882.

The Pharmacopœia of the London Hospital. J. & A. Churchill, Lond., 1882.

Sir Henry Thompson,—Clinical Lectures on Diseases of the Urinary Organs. J. & A. Churchill, Lond., 1882.

C. M. Tidy, M.B., F.C.S.,—Legal Medicine. Part I. Smith, Elder, & Co., Lond., 1882.

Edward John Tilt, M.D.,—The Change of Life in Health and Disease. J. & A. Churchill, Lond., 1882.

Transactions of the American Gynecological Society. Vol. vi. Philadelphia, 1882.

Transactions of the Medical Society of Pennsylvania. Vol. xiii. 1881.

Transactions of the Obstetrical Society of London. Vol. xxiii. Longmans, Green, & Co., Lond., 1882.

Twenty-Fourth Detailed Annual Report of the Registrar-General of Births, Deaths, and Marriages in Scotland.

T. Spencer Wells,—On Ovarian and Uterine Tumours. J. & A. Churchill, Lond., 1882.

Part First.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Note on the Position and Mechanism of the Hæmic Murmur, in Reply to the Paper by Dr Russell of Carlisle.* By GEORGE W. BALFOUR, M.D., F.R.C.P.E.

(*Read before the Medico-Chirurgical Society of Edinburgh, 5th July* 1882.)

THROUGH the courtesy of Dr Russell I have had an opportunity of reading his paper "On the Murmurs of Debility in the Pulmonary and Tricuspid Areas," and I propose now to offer a few remarks on his conclusions.

When Dr Russell says, "It has not been *seriously denied* that in such cases (chlorosis, etc.) there is relative insufficiency of the mitral valve," he must be well aware that, even if he speaks for others besides himself, these words by no means express the opinion held by those British writers who are justly regarded as authorities upon cardiac disease. And when, after a little explanation of the manner in which this insufficiency is brought about and is indicated, he goes on to say, "So far, the facts may be accepted as indisputable, and the inference of mitral regurgitation granted without hesitation," Dr Russell so fully concedes all I am contending for, that I feel inclined to condone whatever else may seem to me to be erroneous in the views he broaches. Dr Russell speaks of "the murmurs of debility in the pulmonary and tricuspid areas," those of you who heard or have read his paper are aware that in reality he speaks of what has hitherto been termed the hæmic or chlorotic cardiac murmur, and that it is only in deference to the novel doctrine of its mechanism which he has adopted that he has thought it right to propound a new nomenclature. While largely agreeing with Dr Russell as to the mechanism of this murmur, I think the time has not yet arrived for its renaming, and that in comparing our own views with those of our predecessors and contemporaries, we shall be enabled more accurately to define our own position, and to avoid all mistakes and confusion, by retaining its old and well-known name, and continuing to call it the hæmic murmur,—notwithstanding that every word we write is an energetic protest against the original meaning of this term, a meaning which is still held most tenaciously by all recognised British authorities, though it is contradicted by every fact in nature, and by every law in physics bearing upon the phenomena in question.

Hope is our earliest author of note on the subject of cardiac murmurs, and he gives forth no uncertain sound as to his opinion of the causes of the hæmic murmur. According to him these causes are threefold:—"1. Attenuation of the blood; 2. Unfilled arteries permitting unusual vibration of their walls and a rippling current; 3. A certain velocity of the current occasioned by abrupt contractions of the heart."[1] You can have no difficulty in perceiving from this that Hope regards even the more truly cardiac portion of this murmur as strictly arterial in character. "It is," as he elsewhere remarks, "confined to the aortic orifice (so far as I have yet discovered), and to the first sound."[2] And this classic position of the hæmic murmur, as also this classic idea as to its causation, still remain paramount throughout the works of all recognised British authorities. Very few being able even to conceive it to be audible in any other position than the base, while to all, almost without exception, it is a purely blood murmur—as its name imports—produced by the circulation of an abnormal blood through a normal heart. In regard to the cause of such abnormal sounds, Hayden says, "Hæmic murmurs, as the name implies, are of blood origin, or due either directly or indirectly to an alteration in the quantity or in the corpuscular constitution of the blood. They may be located in the heart, the arteries, or the veins;"[3] and at another place he says, "at least two factors enter into the causation of hæmic murmurs, viz., 1. *Friction* of the blood corpuscles, (*a.*) against one another, and (*b.*) against the edges of the opening and the walls of the vessel; and 2. *Vibration* of the heart and walls of the vessels."[4] While he is equally dogmatic as to the position where they are best heard, equally conclusive as to their complete dissimilarity to organic murmurs, and equally certain as to the inconsequential manner in which they are propagated. "Cardiac murmurs," he says, "of hæmic origin are invariably basic, they are loudest at midsternum or in the anatomical site of the orifices of the aorta and pulmonary artery; with this point as a centre, they have a diffusion-area of three to four inches in diameter, according to the intensity of the murmur and the conducting qualities of the chest wall; but they never exhibit a definite line of propagation, as is the case with organic murmurs in this situation.

"Not unfrequently, but only in aggravated examples, murmur likewise exists at some point of the ascending and transverse aorta, and in the carotid and subclavian arteries, but never, as far as I have observed, in unbroken continuity throughout these vessels,—a feature in which they differ from organic murmurs at the mouth of the aorta. The latter are, moreover, not unfrequently audible at the apex, though with diminished intensity; the former never."[1] I have selected these statements of Hayden, not only because they are the most recent authoritative exposition of the position and mechanism of the hæmic murmur, but also because they are in entire accordance with the opinion of other British authorities, and are withal so full and precise that we cannot mistake his meaning, though we may deem it inconceivable how he could justify his views even to himself. At another time I hope to submit these opinions to a little healthy criticism; at present I only quote them to show that, in regard to the causation of the hæmic murmur, Dr Russell is on my side, and not on that of the authorities. As Stokes is almost the only British authority who recognises the possibility of the hæmic murmur ever being audible at the apex,[2] and as all the others agree with Hayden, it is needless to do more at present than quote the very strong statement of Dr Walshe, who says, "the doctrine of some observers, that true blood murmur may be *systolic* in time and seated at the apex, appears to me wholly untenable; how deficiency of red particles in the blood can lead to its reflux through the mitral orifice I am at a loss to conceive."[3] But that which Dr Walshe regards as "inconceivable," Dr Russell accepts as "indisputable," and to this extent, and this really involves the whole question at stake, I have to welcome him as a most acceptable ally. Unfortunately, the points on which we differ are put so strongly, and yet so inconsequently, by Dr Russell, as very much to lessen the value of his alliance.

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[1] *A Treatise on Diseases of the Heart, etc.* John Churchill, London, 1839. P. 102. [2] *Op. cit.*, p. 389.

[3] *The Diseases of the Heart and of the Aorta.* Dublin, 1875. P. 245.

[4] *Op cit.*, p. 248.

Dr Russell objects to the primary basic portion of the hæmic murmur being looked upon as transmitted through the auricle.

I. *Because he has never seen an auricle so enlarged as to warrant the belief that it is the cause of the pulsation claimed for it.* This is to be regretted for his own sake, but it is not much to be wondered at in an experience so limited as only to afford three corroborative cases, and it cannot be allowed to affect the credibility of those, myself among the number, whose larger experience enables them to speak with perfect confidence in regard to such an auricular enlargement. Still less does it justify Dr Russell in stating that even in mitral stenosis such an enlargement of the auricle is "not only not observed," but is "a pure assumption," or in stigmatizing Rosenstein as possessed of an undesirable "play of imagination," because he states that in mitral regurgitation the auricular appendix lies upon the pulmonary ostium. Dr Russell seems not to be aware that even in health the appendix of the left auricle is so commonly visible in front lying on the base of the left ventricle, close to the pulmonary ostium, that Walshe describes this as the usual appearance "as the organs lie *in situ*." "The middle point of this auricle," Dr Walshe goes on to say, "from above downwards corresponds to the cartilage of the third rib; the auricle encroaches to a variable extent on the second and third interspaces."[1] And Sibson says "the appendix of the left auricle, which during the diastole of the ventricle is scarcely visible, descends during the systole, and moves rapidly forwards and downwards, so as to replace the retreating ventricles, and to fill up the angle between them and the pulmonary artery."[2] But what happens during the auricular diastole is merely a minor and transient phase of the auricle as it is when permanently dilated, and this has been so long and so well known that Stokes describes a temporary dulness, occupying the whole of the upper part of the left chest, as probably depending upon a sudden and excessive dilatation of the left auricle.[3]

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[1] *Op cit.*, p. 252.

[2] *Diseases of the Heart and Aorta.* Dublin, 1854. P. 533:—"I am strongly under the impression that not only the prolongation of the first sound, but also the murmur in fever, may occasionally be found under the lowest portion of the sternum."

[3] *Diseases of the Heart.* London, 1873. P. 86.

Both Hayden and Walshe recognise "percussion dulness in the second left interspace," with pulsation in the second and third left interspaces, about one inch from the sternum, as physical signs indicative of dilatation of the left auricle.[4] And Naunyn speaks distinctly of the dilated appendix of the left auricle winding round the pulmonary artery to reach the anterior surface of the heart,[5] and speaks of it as too well known a fact to require any proof. Yet he did prove it, for after death he stuck needles into that part of the chest wall where, in mitral insufficience, the basic murmur was heard loudest, and he found the needle sticking in the appendix of the left auricle in the position described. Dr Gibson has caused the pulsations of these dilated auricles to record themselves graphically in a most unmistakable manner;[6] and I myself have often seen these before death, and have frequently seen them after death overlying the pulmonary ostium and the base of the left ventricle. Nevertheless, such an auricle is not a sight to be seen every day, and I can readily believe Dr Russell has never seen one; but this is no justification of the strong language he has employed in regard to those who have described a phenomenon which he ought to have known is much more common than thrombosis, and is accepted by all the best authorities as an indisputable fact.

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[1] *Op. cit.*, p. 4.

[2] *Reynolds's System of Medicine*, vol. iv. London, 1877. P. 67. *Vide* also p. 80.

[3] *Op. cit.*, p. 204. [4] Hayden, *op. cit.*, p. 576. Walshe, *op. cit.*, p. 31.

[5] *Berliner Klinische Wochenschrift*, April 1868, p. 190.

[6] *Lancet*, Sept. 1877, p. 418; and *Ed. Med. Jour.*, October 1877, p. 299, and May 1878, p. 1012, also August 1882, p. 118.

II. *Dr Russell holds that his second case proves conclusively that neither the auricle nor the appendix is the seat of the hæmic murmur.* This case died of pernicious anæmia. The apex beat in the fifth interspace, and dulness in the second interspace, extended outwards for a distance of one inch. There was a faint blowing murmur over the apex, and this attained its maximum intensity in the second interspace, half an inch to the left of the sternum. *Post mortem* the origin of the pulmonary artery is said to have been under the second rib, the right ventricle (conus arteriosus) is also said to have extended in the second interspace for two inches to the left of the sternum. The left auricular appendix was not visible in front at all, and the heart had to be turned aside to bring it into view as it lay behind.

I think I may be permitted to doubt that this case conclusively proves anything at all. Had it been narrated with sufficient accuracy, I might very well accept it as an instance of the mode in which the hæmic murmur is developed in a heart with a preternaturally short *appendix auriculi,* such as we see now and then, though rarely. Unfortunately, the position of the auricle *post mortem* is no proof of its state during life, and where there is no mitral stenosis, an auricular appendix beating in the second interspace during life, may very well empty itself and contract out of sight in the act of dying. It is quite common for arteries which seem during life to be large, dilated, and apparently aneurismal, to be found after death of scarcely more than the normal calibre, and I now refer to arteries which can be seen and felt, as well as percussed and listened to. We are all acquainted with the phenomenon of concentric hypertrophy of the ventricles, and there is no doubt that a similar state of the auricle is of occasional occurrence, and that it is quite capable of accounting for the retrogression of the auricular appendix. There are, undoubtedly, a few occasional cases of short auricular appendix; it is possible that the hæmic murmur in them makes its first appearance as a tricuspid murmur, but it might also very well, from my point of view, first become audible in the classic position as an aortic systolic murmur. Such abnormal cases prove my position, instead of disproving it, and they help to account for the discrepancy of views in regard to the position and mechanism of the hæmic murmur. But they must be very rare; I am not conscious of having ever seen one, and the case in question is so imperfectly narrated that we have no certainty that it has been of this character. For example, the right ventricle (conus arteriosus) was found *post mortem* to extend outwards in the second interspace for a distance of *two inches* to the left of the sternum; but during life percussion dulness was not found beyond *one inch* from the sternum, and the position of maximum intensity of the murmur is said to have been over the centre of this dulness (half an inch from the sternum). Also, the apex of the heart during life was held to beat in the fifth interspace, half an inch outside the nipple line, yet the origin of the pulmonary artery was found *post mortem* to lie under the second rib (exact position not stated). But an enlargement of the heart upwards from the fifth interspace to the second rib is so altogether contrary to experience, that it ought to have been verified by careful measurement, and in the absence of this verification it cannot, I fear, be accepted. Apart from the *post mortem* appearances, this case, from the physical signs found during life, resolves itself into an ordinary case of dilated heart with hæmic murmurs. The contracted auricle is of no value one way or another, being an exceptional phenomenon in any case, while the other appearances are so unusual, as described, that they cannot be accepted unless properly verified.

III. *Dr Russell found some of his hæmic murmurs so harsh, that he looked on them as at least partly frictional in character.* The hæmic murmur is well known to present occasionally every possible variety of character, but I quite agree with Walshe that "permanent harshness and high pitch are never associated with true hæmic murmur,"[1] and a frictional hæmic murmur is to me alike unknown and incomprehensible.

IV. *Dr Russell regards the endocardiac portion of the hæmic murmur as produced in the pulmonary artery by the pressure of the dilated left auricle pressing on the back of the artery, constricting it, and giving rise to fluid veins within it.* This argument is based upon the fact that a firm, inelastic tumour, tightly embracing an artery, or any tumour resting upon an artery with sufficient weight to compress it, gives rise to a murmur by constricting the arterial lumen and producing fluid veins within it. But it is absolutely impossible that the left auricle can ever so compress the pulmonary artery. Anatomy teaches us that the left auricle lies lower than the pulmonary artery, with which it only comes in contact at its upper part, just where the sinus passes into the appendix. Any pressure exerted on the pulmonary artery by the left auricle must therefore be exerted obliquely upwards and over a very limited area, the pulmonary artery being, to some extent, protected by the aorta, which lies between it and the auricle.[2] Moreover, to gain a fulcrum from which to act, the left auricle must be so dilated as to rest upon the vertebræ, and must thus compress both the œsophagus and the descending aorta. We need, however, be under no apprehension of any inconvenience from this, as the difference of the blood pressure within the pulmonary artery and the aorta is so great (83.3 mm. Hg. in the one and 250 mm. Hg. in the other), that the circulation through the former would be completely blocked long before any appreciable compression could be exerted on the latter. Indeed, in order that the pulmonary artery may be sufficiently constricted to give rise to a murmur during the ventricular systole, it is necessary to suppose that there is a minimum pressure within the left auricle, during its diastole, greater than that within the pulmonary artery at its maximum. But it is so obviously impossible that the circulation could be carried on under these conditions, that I need not say that this hypothetical cause of a pulmonary murmur is absolutely untenable.

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[1] Walshe, *op. cit.*, p. 87.

[2] For the anatomical relations of left auricle, *vide* Todd's *Cyclopædia of Anatomy and Physiology*, vol. ii. pp. 578 and 582; Luschka, *Die Brustorgane des Menschen*, Tubingen, 1857, tafeln. iv. and v.; and Pirogoff's *Anatomia Topographica*, Petrop., 1859, fasciculis ii. tabulæ 6, 7, 8, 9; and fasciculus ii. a tabula 4, fig. 2, and tabula 6, fig. 2.

To conclude, I may say that I agree with Dr Russell when he says that hæmic bruits, "murmurs of debility," are always due to a dilated heart. I also think it possible that we may now and then meet with cases with a short *appendix auriculi.* In those cases I would, however, expect the primary murmur to be heard in the classic position, in the first place at all events, though no doubt it would be almost simultaneously audible in the pulmonary artery and in the tricuspid area. But I have never seen any case of this kind, and they must be extremely rare. I regret that, for the reasons already stated, I cannot agree with any of the other opinions Dr Russell has advanced. They display, to use his own expression, a flight of imagination which, though it does not transcend, is at least equal to anything of the kind I am acquainted with in connexion with cardiac pathology.

ARTICLE II.—*A Case of Diabetic Coma with Lipæmia.* By Professor THOMAS R. FRASER, M.D., and J. R. LOGAN, M.B. and C.M.

(Read before the Medico-Chirurgical Society of Edinburgh, 1st February 1882).

SINCE the important paper communicated to the *Edinburgh Medical Journal* in July 1879 by Professor Sanders and Dr Hamilton, very few additional facts have been recorded to confirm their theory that the fatal dyspnœa and coma of diabetes are due to lipæmia and fat embolism. With the exception of the cases they have described, the evidence bearing on this termination of diabetes consists of two cases mentioned by Dr Gamgee, and one by Dr Foster of Birmingham, which do not altogether support the theory, and of a case published by Dr Starr of Philadelphia, in which, on the other hand, the theory is amply confirmed by the demonstration of post-mortem appearances very closely resembling those described by Sanders and Hamilton. The statement of Dr Babbington in 1836, that the blood in diabetes is at times specially characterized by its milk-like appearance, may also be regarded as confirmatory evidence. The absence of a greater amount of confirmatory evidence—which has induced one of the most recent writers on diabetes to state that the data in favour of the theory are yet too few to make its acceptance justifiable—may find an explanation in the unusual occurrence of fatal dyspnœa and coma in cases of diabetes, or in the fact that fatal cases of diabetes may present these symptoms unassociated with the concurrence of lipæmia and fatty embolism.

As such cases have been recorded, it becomes of importance to add to the limited evidence now existing in favour of the view that lipæmia and fatty embolism may occur in some of the cases in which diabetes terminates with symptoms of dyspnœa and coma. It is for this purpose that we place on record the following case. It has, besides, a special interest in the fact that a demonstration was made during the life of the patient of the occurrence of an excess of fat in the blood, coinciding with the existence of coma and dyspnœa.

R. M., aged 35, a boot-closer, was admitted into Ward XXIII. of the Infirmary on the 7th of November 1880, with the symptoms of diabetes mellitus. Six months before admission he had noticed that he required to urinate more frequently than before, and very soon afterwards he suffered from thirst, pain in the back, and sleeplessness. He obtained advice at the Richmond Street Dispensary, and improved under the treatment that was prescribed; but a fortnight before his admission to the Infirmary he caught cold, and relapsed into his former condition of weakness.

He is married, and has had seven children, four of whom are alive. There is no history of diabetes in any of his near relations. He has been always steady in his habits, and his occupation required him to be at work for ten or eleven hours daily.

At the detailed examination made on the 12th of November it was noted that the patient is a man 5 ft. 5 inches in height, with a pallid complexion, and somewhat emaciated, as he now weighs 8 stone, whereas his usual weight was 9 stone.

The skin is generally dry, but sometimes moist with perspiration. Teeth in pretty good condition. Tongue with a slight gray fur. Has an acid taste, and on examining the reaction of the buccal fluid it was found to be strongly acid. Has a constant thirst, which leads him to drink about eight pints of liquid daily. His appetite is good, but by no means ravenous, and he suffers from heartburn and flatulence after meals. The bowels are rather constipated. The condition of the abdomen and of the liver and spleen was found to be normal. He did not suffer from cough nor dyspnœa, the respiratory movements occurred about twenty-two times in the minute, and physical examination of the lungs revealed no abnormality. The pulse was small and soft, but not frequent, and the second sound of the heart was reduplicated at the base.

He suffers from slight dimness of vision, the cause of which was not ascertained further than that the existence of cataract was excluded. The other special senses and the central and peripheral nervous systems were functionally in a healthy state.

Micturition is frequent and unaccompanied with pain or any difficulty. Has recently passed from 200 to 270 ounces of urine in the twenty-four hours, and since his admission it has been of a straw colour, with a slightly sweet odour, an average specific gravity of 1036, containing an average of 21 ounces daily of glucose, and being free from albumen. Deep pressure over the right kidney causes a little pain. For the last six months patient has lost his sexual power.

On the following day (13th of November) patient commenced an ordinary diabetic dietary.

On the 30th of November he took, in addition, five grains of carbonate of lithia twice a day, which was continued until the 6th of March 1881; and during all that time he was, with a few exceptions, able to go about during the day, and frequently left the hospital for some hours to visit his family, who resided in town. The quantity of urine which he voided became considerably lessened, and his weight steadily though slowly increased, so that he regained his former weight of nine stone. The elimination of glucose was materially affected. Under dietetic treatment alone, it became reduced from the previous amount of 21 oz. in the twenty-four hours to 19 oz. on the 9th November, and 18·48 oz. on the 12th of November; and during treatment with carbonate of lithia, it was still further reduced to 12·5 oz. on the 18th of December, and 8·8 oz. on the 6th of March.

On the 6th of March the treatment with carbonate of lithia was stopped, and in its place the patient received three phosphorus pills daily, each containing only 1–50th of a grain of phosphorus. As some diarrhœa occasionally occurred, the administration of phosphorus was every now and then interrupted for a day or two at a time; but with these exceptions it was continued until the 5th of April. During this period the quantity of urine became still further lessened, and occasionally amounted to less than 100 ounces in twenty-four hours.

Early in April the patient was exposed to cold, and on the 6th of that month the feet became œdematous, and the morning temperature rose to 100°·8. The amount of urine passed in the twenty-four hours fell to 82 ounces. It contained a trace of albumen and only 6¼ ounces of sugar. Some bronchitis, also, was found to be present. He was confined to bed and treated with external applications and the subcutaneous injection of 1–6th of a grain of nitrate of pilocarpine. On the 9th of April the œdema had disappeared, and 100 ounces of urine were voided, which, however, still contained albumen.

Early in the morning of the 10th of April—probably at some time between 3 and 5 A.M.—patient suddenly experienced great difficulty in breathing, with a feeling of so severe oppression that he said "he could have lain down and died." The night-nurse gave him a little whisky; but as his condition did not improve, the house physician, Dr Logan, was sent for at 8 A.M. He found the patient lying in bed in the ordinary recumbent posture, which had been maintained since the urgent symptoms appeared. He was breathing rapidly—34 times in the minute. The face and hands had a dusky, cyanotic hue. The breath had no very distinct odour, but it was somewhat ethereal, its character being marked by the odour of the whisky which had been given to the patient. The pupils were equal and rather small. The patient spoke slowly and a little indistinctly, and appeared to have an imperfect recollection of events that occurred a few hours previously. The pulse was weak, small, easily compressed, and at the rate of 154 per minute.

A little blood was removed from the finger. Its naked-eye appearance was peculiar. It was apparently quite as thick as normal blood, but was whiter in colour, presenting an appearance such as might have resulted from mixing together equal quantities of blood and cream. When examined with the microscope, it appeared totally disorganized, no proper cells being at first visible, but a granular appearance occupied the whole field. In a short time, however, hæmocytes were detected, presenting their usual shape, colour, number, and arrangement; for although many of the hæmocytes lay detached on their sides, there were many well-formed though small rouleaux. In some cases the hæmocytes were marked by clear spots which seemed like nuclei, but were evidently oil globules. The leucocytes appeared more numerous than in normal blood, and a few of them were coarsely granular. Between, and occasionally around, the cells there was an immense number of granules and globules densely packed together, varying in size from a mere speck to bodies as large as a red cell, and presenting the usual refractile appearance of oil globules. There were also a few other bodies of the same size and looking like decolorized red cells. The addition of osmic acid stained the larger refractile granules of a dark green colour, but had no marked effect on the smaller granules.

The patient received, by subcutaneous injection, ℥ss. of ether at 8.15, which was repeated every hour, and also frequent doses of carbonate of ammonia and whisky by the mouth.

At 9 A.M. he was perspiring freely, and in a semi-comatose condition, but was still suffering from dyspnœa.

At 10 A.M. breathing was attended with less effort. The thorax was resonant in front, expiration was prolonged and bronchial in character, and there were no accompaniments. Behind, at both sides, there was dulness on percussion and a few crepitations.

At 10.45 dyspnœa was less urgent; the pulse was slightly stronger, at the rate of 142 per minute; the extremities were cold, and the patient quite comatose. He died at 11.30 A.M., or about seven hours after the commencement of the urgent symptoms.

Some hours before death an examination was made by Dr Gowers's apparatus of the number of hæmocytes and leucocytes. The former were found to number 5,680,000, and the latter 16,000, in the cubic millimetre.

The post-mortem examination was made on the following day by Dr Hamilton. Height 5 feet 4 inches; circumference at shoulders, 37¾ inches. Body well nourished. Rigor well marked, and lividity moderate in amount.

When the heart was exposed the coronary vessels were found to present a remarkable appearance, due to milk-white emboli of large size and considerable length, which gave many of the vessels the appearance of having been injected with plaster of Paris. The organ was flabby and anæmic, but otherwise healthy. The right side was loosely filled with pink blood, which, after removal, presented on its upper surface a thick white stratum. Similar characters were presented by the blood from the left side, though not so decidedly. The blood in both venæ cavæ had the same characters as that in the right side of the heart. Floating in the blood were numbers of white clots. Both pleural cavities were dry.

Between the upper lobes of the left lung there was a round patch, about the size of a five-shilling piece, of a milk-white appearance, and apparently situated in the substance of the pleura. On being incised, a substance like milk escaped from it. The lung contained a large quantity of pink blood, which became brighter pink on exposure. The right lung was in a similar condition.

Pus between [illegible]

The liver was not enlarged. Its substance seemed healthy, but the portal and hepatic veins both contained much pink-coloured blood.

The spleen presented a dappled appearance, due to its being anæmic in some parts, and to its containing in other parts the milk-like substance.

The kidneys were anæmic, and the capsule could be easily peeled off.

The vessels of the omentum contained in many places very long white emboli, which were apparently situated in the branches of the portal vein, and similar emboli were present in the intercostal vessels. The blood in the abdominal vena cava presented the same characters as that removed from the heart.

On raising the scalp, a white patch about the size of a five-shilling piece, and apparently caused by extravasation, was seen on the left side. The vessels of the brain, both arterial and venous, had a milk-white appearance. The brain substance appeared markedly anæmic.

All the viscera possessed an acetone-like odour.

A microscopic examination of the blood and of many of the viscera was afterwards made. The blood removed after death had much the same characters as that examined during the life of the patient, except that there were a greater number of what have been regarded as decolorized hæmocytes. The application of osmic acid, caustic potash, magenta, and other reagents showed that the blood contained oil granules and particles of albumen or fibrin in addition to the ordinary constituents. The blood-clot was also examined after hardening in Müller's fluid and spirit, and before and after the application of reagents. It was thereby shown to be composed of alternating layers of blood-cells and fatty matter, together probably with some albuminous particles, the whole being bound together by fibrin. The reticulated arrangement of the latter was rendered apparent by the addition of chloroform.

When sections were made of the liver, each lobule was distinctly visible, the centre being darker than the periphery. Microscopic examination with the aid of reagents showed that the vessels were filled with normal blood-elements, along with other unusual constituents, consisting of fat and albumen in the form of granules; and that fatty and pigmentary degenerations had occurred.

When the kidneys were examined, the whole of their blood-vessels—vasa recta, and glomeruli vessels—were seen to be distended with blood-cells, globules of fat, and smaller particles, which were dissolved by acetic acid, and were probably, therefore, of albuminous composition.

Sections of the lung, under naked-eye inspection, appeared to have the tissues well filled with blood. Under a high power all the capillaries were found in a state of dilatation and intense congestion. In some parts the red cells were seen closely packed, so as to be distorted in their shape, but their colour was well preserved. In other parts of the vessels a translucent substance, generally in the form of minute globules pressed together, and a few granules, were seen. The globules were larger than those in the liver; indeed, in some of the vessels they had run together to form oily masses of the size of several red blood-cells. The parts of the capillaries containing the globules were occasionally more dilated than the other parts. The parenchyma of the lung presented no peculiarity.

The sclerotic, conjunctiva, iris, and retina all contained vessels filled with contents similar to those in the lung bloodvessels. The sclerotic and cornea were both blackened with osmic acid; and in the meshes of the latter were seen, with a high power, a few globules and granules, apparently fatty. They probably were conveyed there during life; but as similar globules were moving about, having escaped from the bloodvessels, it is impossible to be certain that all those seen in the meshes of the cornea had obtained an entrance during life.

At the post-mortem examination a small quantity of urine was found in the bladder. It was of a light straw colour, had a marked acetone odour, and was found to contain about 1-7th of albumen. The percentage amount of urea and of glucose present in it was considerably below that discovered in any examination made during the life of the patient. Microscopic examination of the grayish-white sediment which formed after it had stood for a short time revealed the presence of a few tube-casts and of an enormous number of cells of all the forms present in the urinary tract, along with some tesselated epithelial cells that had probably proceeded from the urethra.

To summarize the results of this examination:—In the blood there was found fatty matter, precipitated albumen, and a substance having an odour like that of acetone. The fat seems to have adhered largely to the sides of the bloodvessels, causing an obstruction in the flow of their contents, resulting in congestion and in extravasations of the vascular contents. The lung stasis thereby produced would account for the dyspnœa and cyanosis; and the cerebral congestion would probably cause coma, the production of which might have been aided by defective nutrition and by poisoning resulting from accumulation of effete matter and from the presence of acetone.

These may be regarded as the immediate causes of the fatal termination. The remote cause seems to have been exposure to cold, one of the results of which was an inflammatory change in the kidneys, which interfered with their eliminative function, and hence the marked diminution in the quantity of urea, and probably of glucose, excreted. The evidence appears to point to the fact that the fatty matter so largely present in the blood was universally and equally distributed throughout the body. Its origin may in that case be reasonably assigned to some constituent existing in the blood, which had somewhat rapidly undergone transformation. The blood-corpuscles could not have produced it, for their number was not lessened.

The chemical relationship between glucose and fat is a very remote one, nor can albuminous matter be either rapidly or easily transformed into fat. An altogether satisfactory explanation, therefore, of the origin of the abnormal constituents present in this and in similar cases cannot be given from existing data. We can only advance hypotheses; and our contribution to these hypotheses is that from the glucose present in the blood the acetone was mainly derived, while the fatty matter originated from a transformation of the albuminous constituents of the blood-plasma.

ARTICLE III.—*Quarterly Report of the Royal Maternity and Simpson Memorial Hospital.* By ALEXANDER RUSSELL SIMPSON, F.R.S.E., Professor of Medicine and Midwifery and the Diseases of Women and Children in the University, President of the Obstetrical and Vice-President of the Medico-Chirurgical Society of Edinburgh.

(*Communicated to the Edinburgh Obstetrical Society* 10*th May* 1882.)

THE following report represents the work in our lying-in hospital during the quarter from 1st February to 30th April. Mr James Hewetson, M.B., and Mr J. Borthwick, M.B., had been appointed house surgeons; but these gentlemen having retired from office during the quarter, they were succeeded by Mr T. Wharton Cox, M.B., and Mr R. D. Macgregor, who have drawn up the record.

Extern Cases.

The total number of cases treated in this department was 162. Of these only 22 were primiparæ, 140 multiparæ. The average age of the former was 20·4 years, of the latter 23·6 years.

Mortality.—There was one maternal death, due to post-partum hæmorrhage, and 13 fœtal. Of the 13 children 7 were still-born, 2 being putrid; 4 died after birth, 2 from debility, 2 from convulsions.

Instrumental Labours.—Forceps were applied in 13 cases, the indications for their use being as follows: 2 cases justo-minor pelvis, 3 cases inertia, 3 cases prolonged labour, 1 case persistent occipito-posterior position, 2 cases flat pelvis, 1 case prolapsed funis, 1 case was a brow complicated with prolapse of the cord. All of these cases did exceedingly well.

Presentations.—L.O.A., 138; R.O.A., 10; R.O.P., 3; L.O.P., 2; face, 1; brow, 1; 1 footling; breech, 3 (L.S.A., 2, and R.S.P., 1).

Plural Births.—There were 3 cases of twins, and in all the presentations were head and breech.

Intern Cases.

The number of patients treated in the house numbered 56. Of these 27 were I.-paræ, 11 were II.-paræ, 7 were III.-paræ, 5 were IV.-paræ, and 5 had borne more than 4 children.

Age of Patients.—The average age of the primiparæ was 24·8 years; youngest 17, oldest 37. Multiparæ, average age was 28·8; youngest 21, oldest 38.

Classification of the Labours.—7 were laborious, 2 preternatural, 3 complex, 2 precipitate, the remaining 42 normal.

Duration of Labour.—The average duration of the primiparæ was as follows:

1*st Stage.*—14 hours 57 minutes; shortest 1 hour, longest 72 hours.

2nd Stage.—1 hour 37 minutes; shortest 15 minutes, longest 11 hours.

3rd Stage.—22·1 minutes, without counting the time taken in one case of retained and adherent placenta. The average time was 16·4 minutes; shortest 3 minutes, longest 2 hours 45 minutes.

Multiparæ. *1st Stage.*—6 hours 58 minutes; longest 18 hours, shortest precipitate.

2nd Stage.—1 hour 21 minutes; longest 7 hours 30 minutes, shortest precipitate.

3rd Stage.—18 minutes; longest 40 minutes, shortest *nil*, the placenta coming directly after the child.

Thus the average duration of labour in primiparæ was 16 hours 56 minutes; in multiparæ, 8 hours 37 minutes. The average duration of all the labours was 12 hours 46 minutes.

The average length of the cord was 22·01 inches; the longest 37½ inches, shortest 9½ inches.

Presentations.—With regard to the presentation of the children in the total 56 cases, 52 were vertex, 2 breech, 2 cases twins in one of which both fœtuses presented by the vertex, in the other one fœtus by the vertex, the other by the shoulder.

Positions.—Multiparæ, L.O.A., 20; R.O.A., 2; R.O.P., 1; L.O.P., 1; face, 1; breech, 2. Primiparæ, L.O.A., 19; R.O.A., 6; face, 1.

Of the two plural births, both were in multiparous women.

(1.) 1st child, vertex L.O.A.
2nd „ „ R.O.P.
(2.) 1st „ „ L.O.A.
2nd „ right shoulder presentation.

Sex of the Children.—In the twins, 1st pair were of the opposite sexes; 2nd pair, both were males. The children of the multiparæ, 11 were males, 16 females; primiparæ, 12 males, 14 females.

Mortality.—There were no maternal deaths. 4 fœtuses were born putrid, all of which were premature; 1 was stillborn, 3 died, 1 was accidentally overlain, 1 died of infantile convulsions, 1 from debility.

There were 3 instrumental labours in the house. In one case forceps were had recourse to when the head was low down in the pelvis for non-rotation forwards of the occiput. In the other two cases axis-traction forceps were applied in consequence of uterine inertia having become established. All did well and made a rapid and good recovery.

The average duration of the patients' stay in the house was from 14 to 16 days, though some patients remained as long as 19 or 21 days. This was owing to their having had either some complication of an inflammatory nature, or, as in 2 cases, a prolonged stay was necessitated by the slowness with which recovery took place after rupture of the perinæum.

Condition on Dismissal.—In 11 cases the fundus uteri was forwards and to the right; in 4 cases it was retroflexed; in 3 cases it was forwards and to the left; in the remainder it was simply lying forwards.

Height of Fundus.—In 2 cases it was below the brim, in 8 it was level with the brim, in all the other cases it was at points varying from half an inch to 3½ inches above the brim. Only in one case was it as high as 3½ inches above, and in two about 3 inches above.

Cervix.—In every case the os uteri was fissured, in 5 cases to the right only, in 18 transversely, and in the remainder to the left side only.

State of Perinæum.—Rupture of perinæum took place in 8 cases; in one case there had been a previous rupture. Six of the women were primiparæ and two multiparæ. In one case wire sutures were used, in all the others carbolized catgut; all did well and healed rapidly, except in one case where all the sutures gave way on the 5th day; but the perinæum had healed well before she was dismissed.

Special Cases.—The following cases have been selected as of special interest and worthy of record.

No. I. *Case of Anencephalous Fœtus.*

Mrs C., an inmate of North Leith Poorhouse, was admitted to the Royal Maternity Hospital on 10th December 1881.

Anamnesis. She was 35 years of age and VIII.-para. Menstruation began at 16, was of the 28-day type, and lasted 4 days with a moderate amount of discharge. The last menstruation was in the end of February, and she first felt stirrage in June. Her condition during pregnancy was fairly good, and there were no complications. Patient had 7 previous children, with normal labours and puerperia. Between the births of the 6th and 7th children she had two miscarriages—one at 6 weeks, the other at 2 months. The last child was born 2 years ago. She nursed all her children except one, who died 24 hours after birth.

Physical Examination on 16th December 1881. Her general appearance was fairly good. The glandular substance of the breasts was apparently atrophied; the nipples were large and prominent. The abdomen was prominent and much pigmented with old and new striæ present, and the umbilicus was flattened out. The abdominal walls were lax; nothing abnormal could be diagnosed in the abdominal cavity. The fundus uteri reached to 1½ inches below the ensiform cartilage. The direction of the uterus was to the right, and its form ovoid. The head of the fœtus was doubtfully felt at the brim of the pelvis. On auscultating a uterine bruit could be heard on the right side; the fœtal heart was heard with difficulty to the left and below the umbilicus, and a confused rumbling over the lower pole of the uterus. Vaginal exploration showed the perinæum to be torn to the sphincter ani. The vagina was very lax and moist; the cervix transversely fissured; the os externum admitted the tip of finger; os internum was closed. The fœtus could be felt high up. Rectum and bladder were normal.

Labour. From date of admission pains set in at various times, but always subsided.

On *5th Feb.* 1882, at 4.30 A.M., the waters suddenly escaped without any preliminary pains; but immediately pains set in of a weak character, and the os was not fully dilated till 7 A.M. On examination a face presentation could be made out, the orbital ridges, nose, and orbits being distinguishable; but behind there could be felt some irregular margins of bone, with a soft, pendulous body attached. Labour progressed very slowly with occasional slight hæmorrhage, and the weak pains were assisted by pressure on the abdomen. The second stage lasted 7½ hours, and the third stage 15 minutes, when the placenta was expressed owing to a threat of hæmorrhage. The *fœtus* was anencephalous, and had probably been dead at least a week. The *sex* was female; length, 15 in.; weight, 4½ lbs. The *placenta* was discoid, its size 7 × 5 in., and weight ¾ lb. The membranes were easily torn, and the *liquor amnii* was of *large* amount and reddish. The cord was inserted subcentrally, was 12 inches long, and its contortions from left to right; there were no convolutions round the child.

Puerperium. The highest temperature was 100° on the evening of the first day, but afterwards it was normal. During the first two days, there were severe afterpains; these were relieved by fomentations.

Condition on Dismissal on 19th Feb. 1882. The breasts were small and atrophied. The uterus was below the brim of the pelvis, and inclined forwards; os uteri was fissured transversely; perinæum was torn; the other tissues and organs were normal.

No. II. *Case of Anencephalous Fœtus.*

A. S., residing at West Port, Edinburgh, was admitted to the Royal Maternity Hospital on 6th Feb. 1882.

Anamnesis. She was single, aged 18, and I.-para. Menstruation began at the age of 14, was irregular in type, lasting from 4 to 6 days, and the quantity of discharge was moderate. Last menstruation was in June, and stirrage was first felt in October. Her condition during pregnancy was fairly good, but her work involved the lifting of heavy weights. The complications of pregnancy were sickness, neuralgia of face and head, and slight swelling of the legs.

No *Physical Examination* was made, as patient was in labour on admission.

Labour took place on 6th Feb. The pains began on the previous day, but were of a weak character. As soon as admitted the waters escaped (5.15 A.M.), and on examination a face presentation was made out, and at the same time there could be felt a soft fleshy tumour attached to irregular margins of bone. It descended very slowly, and weak pains were assisted by abdominal pressure. The second stage lasted two hours, and the afterbirth was expelled along with the fœtus. The soft tumour attached to the head gave rise to considerable hæmorrhage during the labour. The *fœtus* was anencephalous (with the spine bifid as far as the sacrum) and was recently dead—probably during labour; *sex* was male. The *liquor amnii* was excessive, and *cord* was short.

Puerperium. The temperature was over 100° for the first 4 days, and on the evening of the fourth day it was 103°·5. There was no local tenderness. Ten grains of quin. sulphat. reduced the temperature, which afterwards remained normal.

Condition on Dismissal on 17th Feb. was good. The breasts were flaccid. The uterus was two fingers'-breadth above pubis, and its position was to right side. Os was fissured transversely, and admitted tip of finger. The other organs and tissues were normal.

No. III. *Case of Twins: spontaneous version of the second child.*

Mrs H., VII.-para, aged 33, residing at Leith, admitted 20th March, confined 14th April.

Anamnesis. Menstruation began at 14, type 28-day, duration 3 days; last menstruated in July. Stirrage first felt in October. Suffered from persistent morning sickness. *Complications.*—Has had hemiplegia for 8 years, which came on during her second pregnancy; aphasia, 9 months ago speech became much more affected. *Previous Obstetric History.*—Has had six pregnancies; of these 3 were abortions, 2 still-born children, 1 child died æt. 2 years.

Physical Examination. Fundus uteri was 2 inches below ensiform; uterus lay forward and to right; form globular. Head felt at brim; back not made out. Limbs felt at either side of middle line. Uterine bruit well marked. Fœtal heart not heard. External pudenda healthy; vagina lax and fairly moist; os size of a shilling, head felt through it.

Labour on the 13th April. Pains began about 8 A.M., character strong; os dilated fully 5 hours 8 min. P.M.; waters escaped 9 A.M.

Duration of 1st stage, 8 hours 45 min.; 2nd, 2 hours 7 min.; 3rd, 11 min.

Presentations. Child No. 1; vertex, left occipito-anterior. No. 2, shoulder, right dorso-posterior.

Birth of first child was normal. The second came as follows.

The membranes were ruptured artificially, when the right hand and arm of the child appeared at the vulva, followed rapidly by the shoulder. Another pain came on rapidly, when the ear and head appeared and was born, the head having been bent on the left shoulder in the cavity; the body of child rapidly followed, spontaneous cephalic version having taken place. Both children were males, alive but small. Length, No. 1, 18 in.; No. 2, 17½ in. Both weighed 5½ lbs. The placenta weighed 1 lb. 8 oz. There were two cords and two sets of membranes. Cords: No. 1, 20½ in.; No. 2, 19½ in. Puerperium was very good and rapid.

On the 26th of April she left the hospital, when her general health was very good; breasts large, plenty of milk. Uterus was about level with the brim, slightly forwards, low-set, os closed, vagina roomy, perinæum intact.

Children.—Both were well and healthy, suckling, and the umbilici cicatrized.

No. IV. *Case of Cephalhæmatoma Neonati.*

After a perfectly natural labour lasting 13 hours 10 minutes, J. P. was delivered of a full-term healthy living child, male, weighing 7 lbs. 3 oz. There was a very well-marked caput succedaneum situated on the right parietal bone. This to a certain extent decreased in size; but a fluctuating tumour (2½ inches by 1½ inch) remained, irregular in shape but extending to within a few lines of the sagittal suture, constituting a very well-marked cephalhæmatoma. There was no discoloration of the skin. During the child's residence in the hospital the swelling did not decrease in size, but on seeing it after three weeks' time it was evident a degree of absorption had taken place. The tumour was fluctuating and was found, ten days after birth, to contain very dark fluid blood—some of the contained fluid having been drawn off by a hypodermic injection syringe. The child also suffered from severe ophthalmia neonatorum in both eyes.

ARTICLE IV.—*On some Points in the Physics of the Bladder and Rectum; specially in Relation to the Structural Anatomy of the Female Pelvic Floor.* By D. BERRY HART, M.D., F.R.C.P.E., Lecturer on Midwifery, Extra-academical School of Medicine, Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 22*nd March* 1882.)

THE female bladder and rectum lie in the pelvic cavity; and, from this position, they are exposed to the weight of the superimposed abdominal viscera, and bear, more than other organs, the brunt of intra-abdominal pressure. We have, therefore, to consider the arrangements in the bladder and rectum for storing their temporary contents so as to prevent premature expulsion of them; and, more difficult still, to study the mechanism by which these viscera expel their contents when desired. In conclusion, it will be of interest to take up rapidly the whole question of the structural anatomy of the pelvic floor—its structure *quâ* intra-abdominal pressure, parturition, and the vesical and rectal functions.

THE BLADDER.

The exact explanation of how the urine is retained in and expelled from the bladder, as well as the cause of some connected anomalous phenomena, is by no means settled. It will be most convenient to take up the following heads:—

I. The position and shape of the empty female bladder, and the muscular arrangements of bladder and urethra.

II. The nervous mechanism of bladder and urethra.

III. The mechanism of the expulsion of the urine from the bladder.

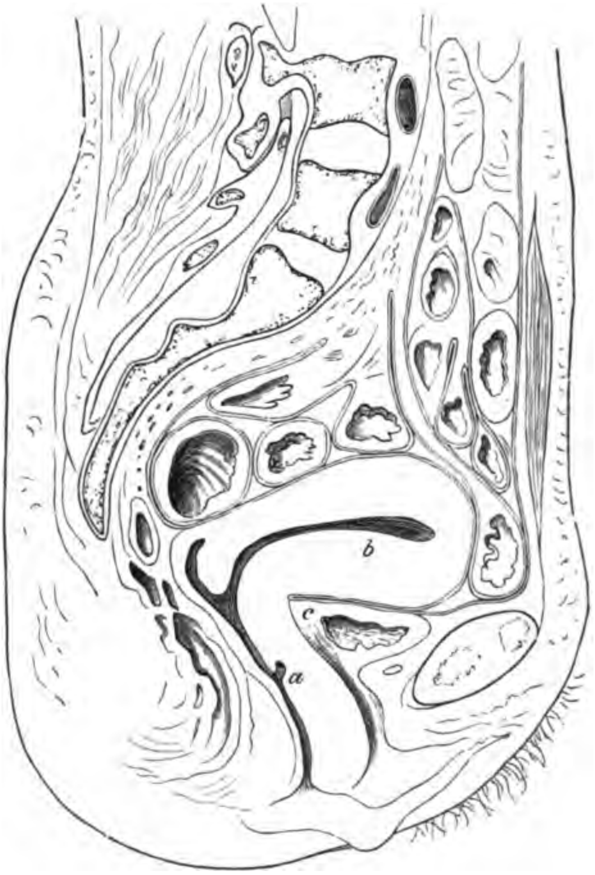

FIG. 1.—Vertical mesial section of frozen cadaver (Pirogoff). *a*, **in front of anterior vaginal wall;** *b*, **uterus;** *c*, **bladder.**

I. *The Position and Shape of the Female Bladder Empty and Distended.*

The female bladder when empty lies *in* the pelvis and *behind* the pubis. The urethra blends with the neck of the bladder at an angle of about 90°; the angular interspace thus formed behind the pubis is filled up with loose fat (Fig. 1). The walls of the bladder are provided with loops of unstriped muscular fibre—external longitudinal fibres, circular fibres within these, and an internal longitudinal layer on which the mucous membrane rests. In the male, the outer layer is arranged in figure-of-eight loops—the smaller loop being, according to Pettigrew, in the prostate, and the larger one in the bladder.

The sphincter vesicæ, in the female, surrounds the urethra; it consists of circular and longitudinal unstriped, and circular (inner) and longitudinal striped muscle; the latter ends 1½ cm. from the meatus urinarius. In addition, Luschka describes a special sphincter of the vaginal and urethal orifices. In the male, the sphincter vesicæ surrounds the prostatic and membranous portions of the urethra—the muscle being both striped and unstriped. In the prostate, the amount of unstriped muscle is large.

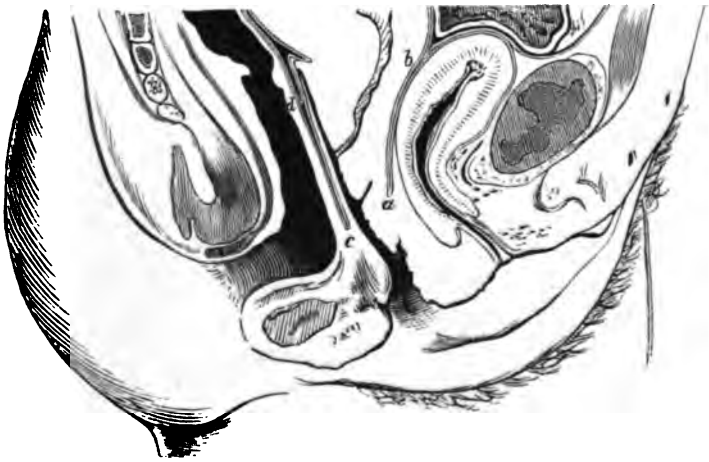

Fig. 2.—Vertical mesial section of female pelvic floor, showing contracted empty bladder (Braune). The peritoneum descends in front of the cervix to *b* and behind the vagina to *d*; *b a* and *d c* are loose extra-peritoneal tissue.
Note the direction of the long axis of the anus, at right angles to the vagina.

The shape of the *empty* female bladder is of interest; I say, specially, "of the empty female bladder," because I know of no drawing or section of the empty male bladder. Anatomists have always persistently considered the state of the bladder when artificially distended to a moderate extent. In the female the empty bladder has one of two shapes: it is either small, oval, and firm to the touch, with its upper border convex; or its upper surface is large and concave, the upper half fitting into the concavity of the lower. In the former shape the anterior and posterior surfaces of the mucous membrane are in contact; in the latter, the upper and lower halves (large in area) are in contact. On vertical mesial section we find the mucous membranes of urethra and bladder forming, in the former shape a curved slit (Fig. 2); while, in the latter, they form a Y-shape, the posterior limb of the Y being sometimes the shorter (Fig. 1).

The shape of the *distended* bladder is well seen in plates by Pirogoff, Braune, and others.

Finally, it should be noted that the bladder and urethra are blended with the neighbouring organs. The union of the *bladder* with these organs is a loose one. In the female the anterior wall has loose tissue in front, while its posterior wall is loosely connected with the anterior walls of vagina and cervix. The urethra has loose tissue in front, but behind is closely blended with the vagina. In the male the posterior wall of the bladder is loosely connected with the rectum. One should expect this arrangement in an organ provided with a muscular arrangement whose contraction diminishes its area.

II. *The Nervous Mechanism of the Bladder and Urethra.*

The sphincter vesicæ has a certain amount of tone, which has been ascertained as follows:—The abdomen was opened and one ureter ligatured. A canula was passed into the other and water poured in until it passed out at the urethra. In the rabbit a column of water 16 to 20 inches in height was required to overcome the tone. If, however, the spinal cord be cut between the 5th and 7th lumbar vertebræ, the pressure required sinks to six inches. Section at the level of the 4th lumbar vertebra had no effect in lowering the pressure required (Kupressow). Further, it has been noted that after section above the 4th lumbar vertebra

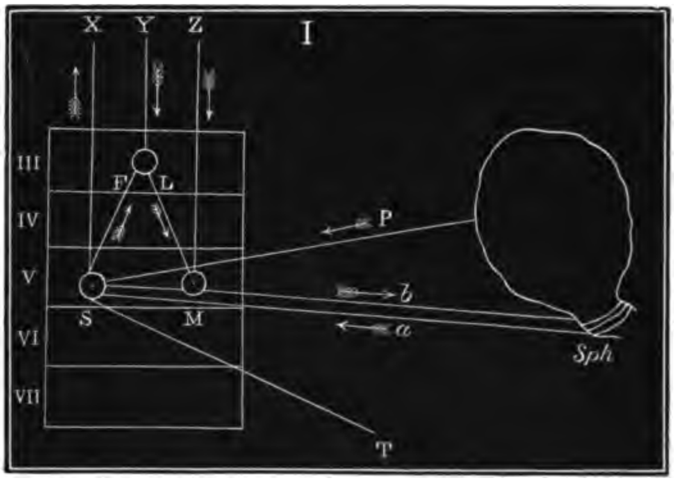

FIG. 3.—Nervous mechanism of bladder (Power). ***a*, Afferent nerve of sphincters; S and M, sensory and motor ganglia.**

the bladder became greatly distended, while after section at the 5th or 6th there was incontinence. In the first instance the sphincter centre is intact, but its excito-motor influences cut off; in the 2nd instance the sphincter centre is destroyed (Fig. 3).

The *motor* nerves for the bladder are the 3rd and 4th sacral. Stimulation of these, in dogs and rabbits, caused contractions of the sphincter; their section produced paralysis. The *sensory* nerves of the bladder run in the great sympathetic, and hence into the spinal cord.

Further, Budge found that electrical stimulus to the membranous portion of the urethra caused a contraction of the sphincter. Finally, stimulation of the inferior cut surface of the spinal cord at any height causes bladder contractions. From all this, Power in an able article, to which I am mainly indebted for these facts, concludes as follows:—

"In the first place, looking at the ordinary sensations that are experienced as the bladder fills, we may conclude that sensory impressions, rising gradually in intensity, are conveyed (through P) to the sensory ganglia (S), from whence they are reflected (through *d*) to the motor centre (M), and from thence to the sphincter, causing this to contract more firmly.

"If the bladder becomes greatly distended, the impression is no longer wholly reflected, but passes onwards and upwards to the brain (through S and along X), and excites conscious uneasiness or pain. If it be desired to retain the water, an impulse is transmitted by motor fibres (through Z) to the motor ganglion (M), and the excito-motor influence (of S) on the sphincter is intensified by the will.

"But suppose that, instead of holding the water, it be desired to discharge it; what happens? The phenomena that are then presented seem to necessitate the admission of an inhibitory, restraining, or regulating centre, which must be in close proximity with the excito-motor centre, and, therefore, at the lower part of the spinal cord, for the action of the will in this matter is not, like its own voluntary muscles, rapid and instantaneous, but is exerted only after the lapse of a distinct interval, and the result is a relaxation of the sphincter.

"We may conceive this impulse to pass down special fibres (Y) to an inhibitory centre (I), which may either act directly (through L) on the motor centre (M), or possibly may send branches directly to the sphincter muscles."

So far as this explanation goes, the urine could be expelled by the reflex inhibition of the sphincter's activity without any contraction of the bladder. There may be, however, a nervous impulse transmitted to the muscular tissue of the bladder also.

III. *Mechanism of the Expulsion of Urine from the Bladder.*

Urination probably occurs in the following way:—Urine trickles along the ureters, which aid its passage by peristalsis, and accumulates in the bladder, which is, for a reason to be given further on, flaccid and non-contracted. As the bladder distends, it assumes the shape seen in plates by Pirogoff, Kohlrausch, and Ruedinger. The vesical sphincter is kept closed by the activity of its motor centre, until the distention reaches the amount causing uneasiness. By a voluntary act the activity of the motor centre for the vesical sphincter is inhibited. The muscular fibre of the bladder by its contraction, aided by the intra-abdominal pressure acting at right angles to its peritoneal surface, expels the urine. When this is accomplished the bladder has the

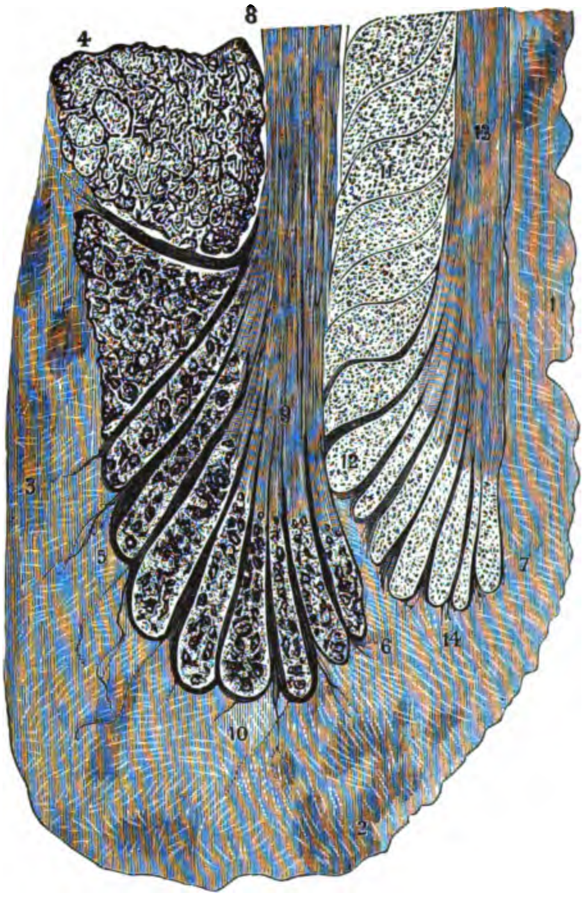

FIG. 4.—Perpendicular section through the end of the rectum (Ruedinger). 1. Mucous membrane of the rectum; 2. Boundary between mucous membrane and skin of buttock; 3. Fat; 4. Levator ani; 5. Sphincter ani externus; 9. Fibres of longitudinal layer, separating external sphincter into parts; 7. Sphincter ani internus; 8. Longitudinal muscular fibres, which radiate out at 9; 13. Longitudinal fibres of musculares mucosæ, which radiate out at 12; 11. Circular fibres of muscular coat; 6, 10, and 14. Slips passing into tissue beyond (Ruedinger).

shape seen at Fig. 2. At the end of urination we find that the strain has caused the pelvic floor to bulge down; in the inspiration following it rises somewhat.

The bladder does not retain its contracted shape, as this would involve prevention of the entry of the urine from the ureters into it (James), but relaxes, and assumes the Y-shape shown at Fig. 1.

Thus the two shapes seen at Figs. 1 and 2 are accounted for by the supposition that the bladder has its systole and its diastole, that the shape at Fig. 2 is the bladder in systole, fixed by rigor mortis; that the Y-shape shows the bladder in diastole. As to the diastole of the bladder, it is evident that the bladder must relax after its systole, the lower relaxed half takes the shape of the subjacent pelvis, while the upper half drops into this. Further, at all times during distention the bladder has quite the form one would expect from the trickling of a fluid into a viscus having the Y-shape on vertical mesial section already described.

Finally, the existence of systole and diastole explains the anomalous sucking-back of the flexible catheter into the bladder, sometimes experienced at the end of urination. In regard to this I should advance the following explanation:—Let us suppose an ordinary india-rubber catheter passed into the distended bladder; by muscular effort of the bladder, intra-abdominal pressure, and relaxation of the sphincter, the urine is expelled along it until the bladder has the shape seen at Fig. 2. As the last drop of urine is expelled, air passes into the rigid catheter, but it does not pass into the bladder, as the eye of the catheter is closed by the vesical mucous membrane. Thus the inside of the catheter is exposed to the ordinary atmospheric pressure. The peritoneal surface of the bladder is under less pressure during relaxation, because the ordinary atmospheric pressure transmitted through the abdominal walls is partly counteracted by the elasticity of these walls. At the end of urination the pelvic floor rises somewhat from its bulging-down position; accordingly, the catheter is pushed by atmospheric pressure into the relaxing bladder (now assuming the diastolic form), and becomes coiled up in its lax folds.[1]

I should, therefore, urge that the urine is expelled by the muscular action of the bladder, aided by intra-abdominal pressure, and that the bladder has its systole, followed by a relaxation.

THE RECTUM.

The rectum is so placed that intra-abdominal pressure presses its anterior and posterior walls against one another (Fig. 2). Intra-abdominal pressure does not act in the long axis of the rectum. The clinical proof of this is absolute, inasmuch as vaginal pessaries are not forced out during straining; the vagina lies parallel to the rectum, and, as intra-abdominal pressure forces the vaginal walls together, it must do the same to the rectum.

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[1] The following experiment shows exceedingly well the effect of atmospheric pressure:—Take two test-tubes of such a size that one fits the other easily, but not too easily. Fill the larger half-full with water, and place the other inside. Then invert both, and at once the inner will be pushed up by atmospheric pressure as the water flows out. The full explanation of all the features of this experiment is complex, and I do not enter into it at present.

See also Dr Duncan's paper on the "Retentive Power of the Abdomen."

It is of great interest to note that the anal axis cuts the vaginal and rectal axes at right angles, *i.e.*, it coincides with the direction of intra-abdominal pressure.

The muscular arrangements of the rectum are of importance; we have musculares mucosæ, and unstriped muscular fibres, circular and longitudinal. The anus is guarded by circular sphincters, an internal and an external—the internal partitioned off by fibres from the musculares mucosæ; the external divided in the same way by longitudinal fibres. Thus, the longitudinal fibres are attached to a fixed point below (Fig. 4). About 2½ inches from the anus, we have the so-called "third sphincter;" this Chadwick describes as two semicircular folds of mucous membrane with circular muscular fibres, lying one above the other, and on opposite sides (Fig. 5). So far as we have gone we see that the rectum is so placed that intra-abdominal pressure does not tend to expel its contents, and that the lower end of the bowel is guarded by strong sphincters; when these relax we get the axis of the anal canal running in such a direction that abdominal pressure, coinciding with it, is in the line most favourable for the expulsion of any mass lying in it.

The intestinal contents are propelled on by peristaltic action, the circular fibres of the colon relaxing to allow the mass to pass on, and then contracting to drive it further down. According to Hilton, the sensitive part of the rectum is its last two inches; this exactly corresponds to the part between the anus and third sphincter.

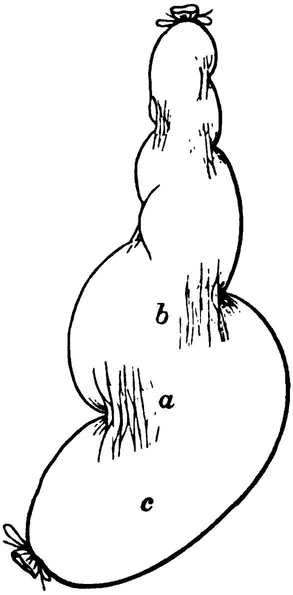

FIG. 5.—Rectum distended by air, showing third sphincter (Chadwick).

The mechanism of the expulsion of the rectal contents is probably as follows:—We have relaxation of the anal sphincters, and contraction of the longitudinal unstriped muscular fibres of the bowel, which are attached to a fixed point below. The circular fibres of the rectum, especially the sphincter tertius, contract, and intra-abdominal pressure drives the rectum down, causing the pelvic floor to bulge markedly. The rectal contents are thus elongated and driven down, partly by intra-abdominal pressure, but more by the circular fibres and downward eversion of the rectal mucous membrane, until they are brought within the anal canal, where intra-abdominal pressure completes their expulsion. Relaxation of pressure now takes place, and the levator ani helps to reinvert the protruded mucous membrane. Chadwick considers the so-called "sphincter tertius" to act as a detrusor fæcium. I hardly agree with him. The view I should advance is, that the part of the bowel specially engaged in defecation lies below this sphincter, that the contraction of this so-called third sphincter limits the eversion of the mucous membrane of the bowel as well as helps on the passage of the rectal contents, and that it forms an upper boundary to the rectal ampoule on which intra-abdominal pressure acts. It is extremely probable that during the expulsion of the rectal contents the part of the rectum below the sphincter tertius is pulled forward somewhat, *i.e.*, is brought more into an axis favourable to the action of intra-abdominal pressure.

STRUCTURAL ANATOMY OF THE FEMALE PELVIC FLOOR.

I have now, in the last place, to state the bearing of all this on the structural anatomy of the female pelvic floor. The floor is to be considered from three points of view: parturition, intra-abdominal pressure, rectal and vesical functions. In parturition the pubic segment is drawn up, and lies partially above the brim; in the non-parturient woman it is pushed against the sacral segment by intra-abdominal pressure. But the floor is partly made up of bladder and rectum, which contain in their walls circular unstriped fibres, whose contraction diminishes the calibre of these organs. Now, all organs with such an arrangement have their periphery almost entirely unattached. In the pelvic floor this is not the case. There, however, we find the bladder and rectum, where in contact with other structures, have loose tissue intervening. The bladder has, accordingly, loose tissue in front and behind; the urethra has loose tissue in front, while the rectum is loosely tied to the posterior vaginal wall. This is necessary to permit the circular fibre of these organs to contract. This provision, however, introduces the weak structural points in the floor, so that we find intra-abdominal pressure forcing intestine, though rarely, behind the bladder, or between the vaginal and rectal walls. Much more commonly it drives down uterus and pubic segment *en masse*, stripping the posterior vaginal wall from the anterior vaginal one.

The special provision for the functions of the rectum has thus introduced an apparently necessary element, which, more than anything else, leads to that troublesome hernia called prolapsus uteri.

LITERATURE.

CHADWICK.—The Function of the Anal Sphincters, so-called. *Am. Gyn. Tr.*, vol. ii. p. 43.

DUNCAN, J. M.,—*Researches in Obstetrics.* A. & C. Black, Edin.
HART.—*Structural Anatomy of Pelvic Floor.* Edin., 1880.
HILTON.—*Rest and Pain.* Smith, Elder, & Co., London.
JAMES.—Physics of Bladder, etc. *Ed. Med. Jour.*, 1879.
POWER.—Physiology of Micturition and Retention of Urine. *Practitioner*, 1875, p. 38.

ARTICLE V.—*The Diagnosis of Advanced Extra-Uterine Gestation after the Death of the Fœtus (with a Frozen Section).* By A. H. BARBOUR, M.A., M.B., B.Sc., Assistant to the Professor of Midwifery in the University of Edinburgh.

(*Read before the Edinburgh Obstetrical Society*, 19*th July* 1882.)

ADVANCED extra-uterine gestation presents, when the fœtus is dead, peculiar difficulties in diagnosis, which are well illustrated by the case which forms the subject of this communication. The accompanying frozen section gives the most truthful representation of the condition on clinical examination, and shows how a positive diagnosis may be impossible.

The following is a brief history—from the notes of Mr Fraser, the clerk who had charge of the case:—

"A. B., ætas 24, iv.-para. Five months ago the patient passed two periods without menstruating, had morning sickness, and thought herself pregnant. Three months ago she began to have irregular hæmorrhages twice or thrice a month, sometimes in considerable quantity. At the same time she suffered from occasional pain in the back and across the abdomen; now and then this was so severe that she had to sit down, but she was never confined to bed. For the last six weeks, she has had difficulty in moving the bowels; three weeks ago, and on other occasions since, there has been retention of urine requiring catheterization."

Condition on First Examination. When I first saw the case the patient was lying in a somewhat collapsed condition, with a weak pulse, and complaining of abdominal pain and violent retching. On palpation of the abdomen there was found a cystic swelling, extending from the symphysis pubis to the epigastrium. On passing the catheter and drawing off a hundred ounces of urine, the swelling proved to have been the distended bladder. The outline of the emptied organ could be distinctly palpated through the abdominal wall, the fundus being three inches above the symphysis. A tumour could now be felt in the pelvis and rising three inches above the brim. On vaginal examination the vagina was found to be compressed against the symphysis pubis and drawn upwards, so that the finger could not reach to the roof. On rectal examination, a tumour was felt bulging through the anterior wall and compressing the rectum. This, on bimanual examination, was continuous with that felt above the brim.

As the case was urgent, the patient was at once removed to hospital and placed under Professor Simpson's care in the Buchanan Ward. More careful examination under chloroform brought out the following facts. The tumour was of semi-elastic consistence, and firmly wedged in the pelvis. The cervix could not be reached per vaginam, but a small projection was felt, which was supposed to be the posterior lip. The condition of the vaginal mucous membrane pointed to pregnancy. The most careful palpation could not detect the uterus distinct from the tumour, although the empty contracted bladder was felt lying on its anterior surface. No uterine contractions could be observed in the walls of the tumour, and there was no ballottement. Auscultation revealed neither uterine bruit nor fœtal heart. The mammæ were pigmented, and gave colostrum on compression.

Diagnosis. This lay between (1) retroflexion of the gravid uterus; (2) extra-uterine gestation; and (3) hæmatocele in the pouch of Douglas, due to the rupture of a Fallopian-tube gestation.

An upward displacement of the pubic segment of the pelvic floor —*i.e.*, cervix, bladder, and retro-pubic fat—occurs, as Dr Hart[1] has pointed out, in retroflexion of the gravid uterus (Fig. 1). It also occurs in cases of a large retro-uterine hæmatocele (Fig. 2). So far as I have read, it has never been described in an extra-uterine gestation of this size; though the diagrammatic sketch of a seven months' gestation recorded by Bandl,[2] shows a certain amount of upward displacement (*v.* Fig. 3). In the present case the empty

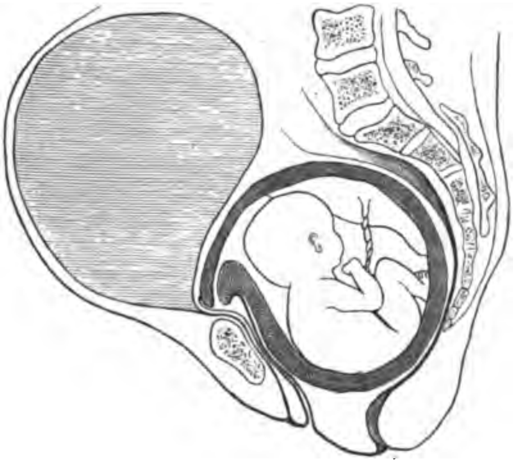

FIG. 1.—Retroflexion of the gravid uterus, producing upward displacement of the cervix and bladder (Schrœder).

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[1] *Structural Anatomy of the Female Pelvic Floor*, 1880, p. 27.

[2] *Die Krankheiten der Tuben*, 1876, p. 86.

bladder was found by clinical examination (confirmed by post-mortem) to have become altogether abdominal.

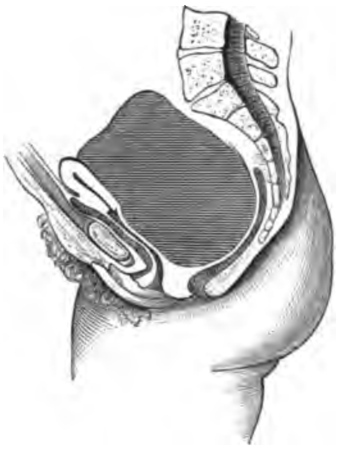

FIG. 2.—Retro-uterine hæmatocele in the pouch of Douglas, producing upward displacement of the cervix and bladder (Schrœder).

The fact that the anterior surface of the tumour was perfectly smooth, and showed no inequality which might represent the fundus uteri, favoured the supposition that the tumour was the enlarged, retroflexed uterus. In all the reported cases of extra-uterine gestation that I have had access to, the uterus was made out distinct from the gestation sac.

The history pointed to either retroflexion of the gravid uterus, with a low position of the placenta, or to extra-uterine gestation; there had been no sudden attack of pain with collapse, as we should have expected in hæmatocele. The absence of uterine contraction and the consistence of the tumour were against the first alternative; while, unless the fœtus was dead, the absence of fœtal heart was against the existence of pregnancy.

As the pressure symptoms were the most prominent feature and called for immediate interference, an attempt was made to push the tumour upwards out of the pelvis—the patient being placed in the genu-pectoral posture, and pressure made by two fingers in the rectum. As this failed, Professor Simpson tapped the tumour with an aspiratory needle through the posterior fornix. The needle was felt to pass into a softish mass, and a few ounces of clear blood was obtained. As blood continued to run from the puncture after the needle was withdrawn, the vagina was packed with salicylic wool.

The sound was not used for diagnosis, because retroflexion of the gravid uterus was not positively excluded until the tumour was tapped. The introduction of the sound would have been difficult. Further, its use in a case of extra-uterine gestation is not unattended with risk: it may set up contractions in the wall of the gestation sac and lead to its rupture, as occurred in Fränkel's case.[1] Exploratory tapping is also, for the same reason, not without danger. It is possible that the rupture of the sac, with the formation of the hæmatocele, was the result of the tapping.

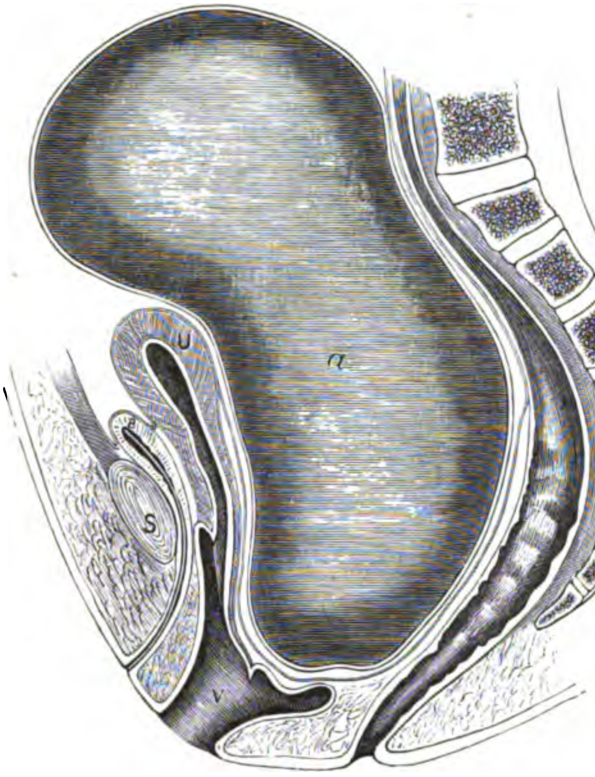

FIG. 3.—Diagrammatic representation of an extra-uterine pregnancy of seven months' duration (Bandl). B, bladder; U, uterus (anterior wall measured 12 cm. long, posterior 16 cm.; thickness at side-walls was 2 cm.), anterior lip is at level of the middle of symphysis, S; posterior lip is at level of urethral orifice; *a*, gestation sac, which reached to umbilicus.

The patient was easier for a day after the tapping; but on the third day the pain increased, the temperature rose, and the tumour increased in size towards the left side. The patient was in too weak a condition to stand abdominal section, though this was contemplated. The temperature kept up between 101° and 102°, and she died on the sixth day.

Post-Mortem Examination. The post-mortem, at which Dr Linton kindly assisted me, was made at the patient's home; only the abdomen was opened. There was no free fluid or lymph in the abdominal cavity. The bladder was found lying behind the abdominal wall as ascertained during life. The omentum and intestines were adherent to a tumour in the pelvis. On detaching them a cavity was opened into, from which about ℥xx. of fluid blood escaped. It was found afterwards that this hæmatocele sac communicated, by a small opening, with the gestation sac.

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[1] "Diagnose und operative Behandlung der Extrauterinschwangerschaft," *Volkmann's Sammlung klinischer Vorträge*, No. 217.

The pelvis was taken out *en masse*, and showed the following appearance. There was a tumour filling the plane of the brim, and rising, in the middle line and to the right, two and a half inches above; on the left side it was three inches above the brim. The uterus was seen *in* the anterior wall (not resting on it), passing upwards and to the left side; the round ligaments could be traced as flattened bands of muscular fibre, the right one arching through the anterior wall, and greatly elongated. The anterior covering of the tumour consisted, therefore, of uterus with peritoneum of right broad ligament (*v.* Fig. 4).

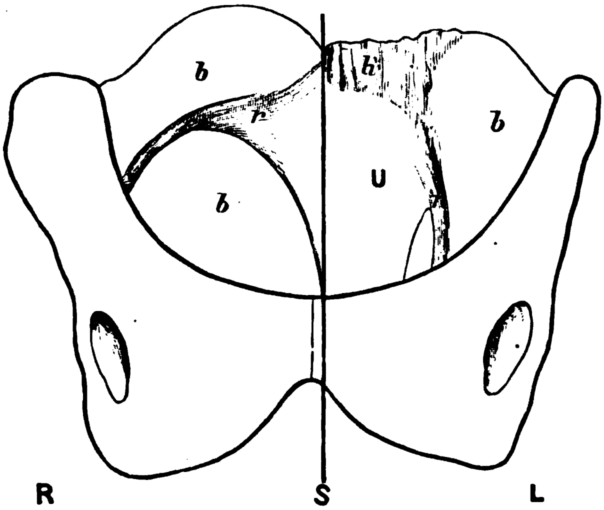
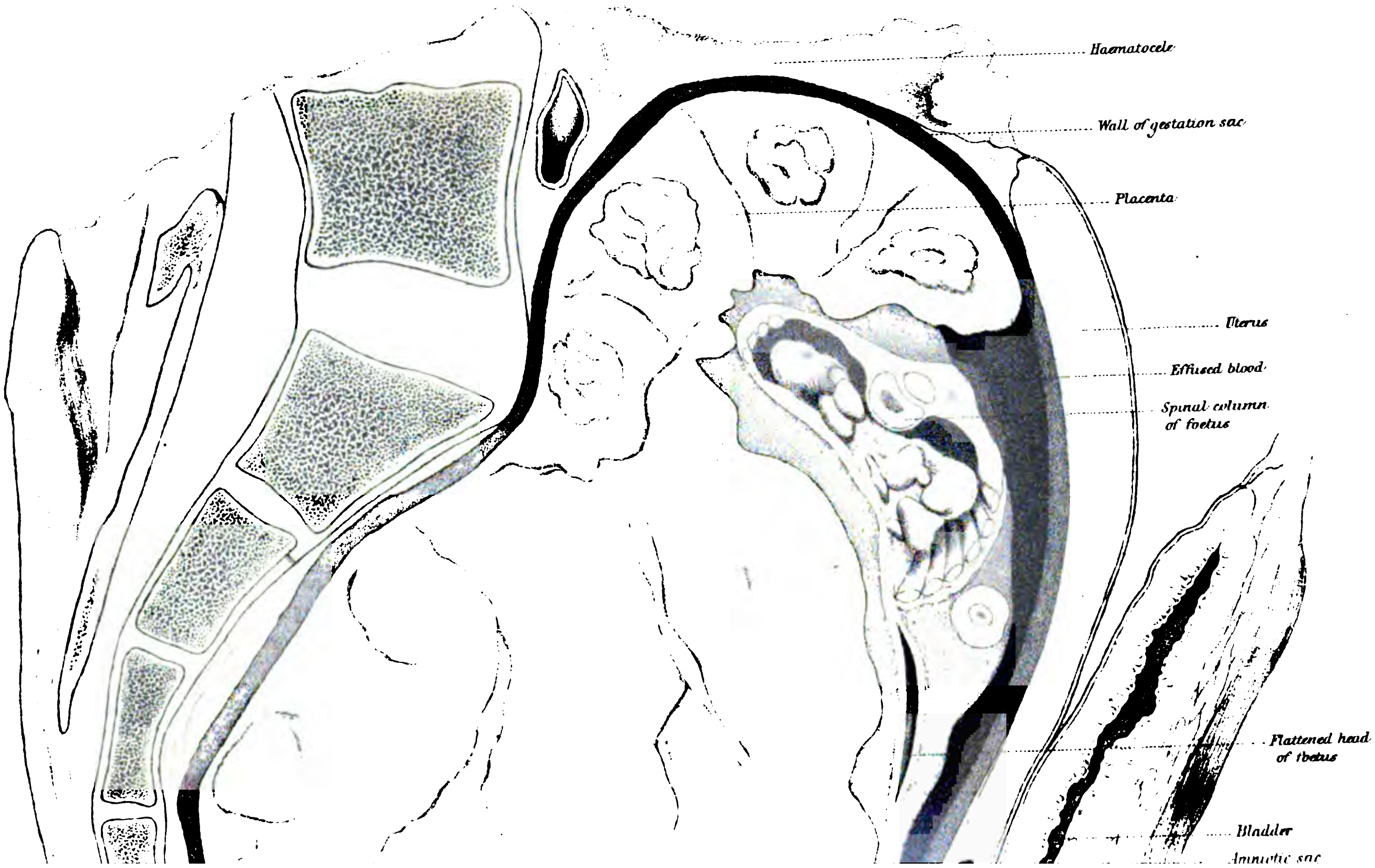
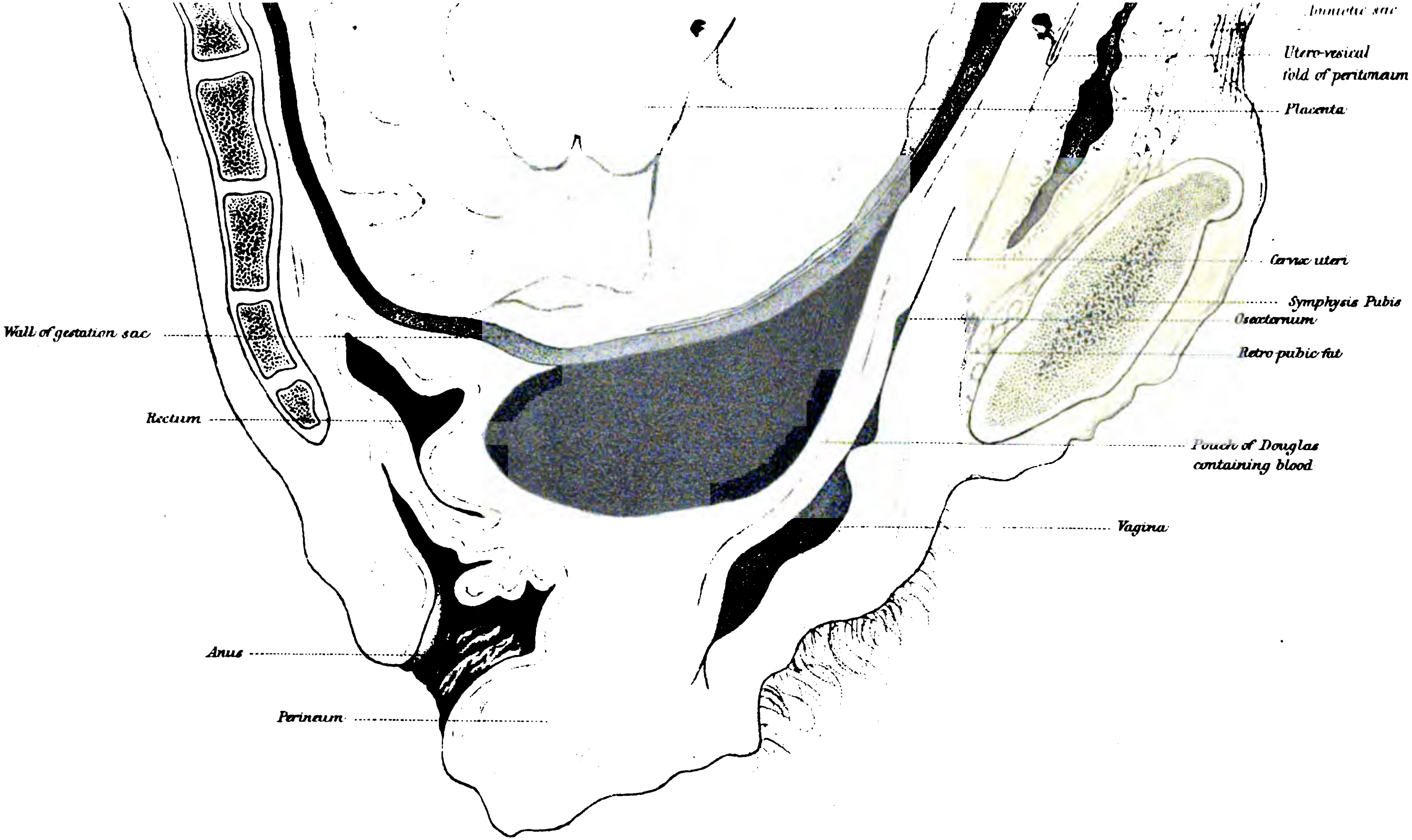


FIG. 4.—Front view of pelvis containing extra-uterine gestation, seen in section in the tinted plate: U, uterus; *b*, *b*, *b*, broad ligaments; *r*, *r*, round ligaments; *h*, adhesions from uterus to omentum which enclosed hæmatocele. The line S indicates plane of section.

The pelvis was put in a zinc case and kept in a freezing mixture of salt and ice for four days. A vertical section was made through the line S (Fig. 4), a little to the left of the mesial plane. A tracing was taken on thin plates of glass, of which the accompanying plate (drawn with Mr Bayne's usual exactness) is a faithful representation. For tracing frozen sections, thin plates of clear glass and a fine camel-hair brush with china-ink are the best materials; for tracing wet sections, ground glass (placed on the preparation under water) and an ordinary pencil are better.


Haematocele
Wall of gestation sac
Placenta
Uterus
Effused blood
Spinal column of foetus
Flattened head of foetus
Bladder
Amniotic sac



EXTRA-UTERINE GESTATION.

Description of Plate. The fundus of the empty bladder is 3 in. (7·6 cm.) above the pubis. The section has not hit on the urethra. The utero-vesical pouch of peritoneum is ¼ in. (·6 cm.) above the plane of the brim. The vagina in its upper third consists of a mere slit, the fornices are obliterated, the anterior lip is completely flattened out, the posterior reduced to a mere thickening in the posterior vaginal wall. The cervical canal has been opened into at its lower part. Owing to the deviation of the uterus to the left side, the section passes through the right uterine wall and not through the cavity. The uterus measures in length (from os externum to fundus) 5¾ in. (14·6 cm.), in breadth 7-16ths in. (½ cm.); from the fundus adhesions passed to the omentum and intestines, which roofed in a hæmatocele. Behind the posterior wall of the uterus but intimately united to it, is the wall of the gestation sac, which is well defined through its whole circumference. It contains the mass of the placenta, which (along with the blood effused into its substance) measures 3¾ in. (9½ cm.) in its greatest antero-posterior diameter, 6½ in. (16½ cm.) in its vertical diameter. The upper portion of the placenta consists of firm tissue, the lower contains recent blood extravasations. The fœtus lies in the amniotic sac, in the upper and anterior part of the gestation sac. It is about the size of a four months' fœtus and has been dead some time, as the bones of the head are flat and compressed. The body is cut through just above the diaphragm, so that the lungs and the inner aspect of the ribs are seen. The right arm is seen in section. The head has fallen down so as to lie on the right side of the thorax; it has collapsed to a mere shell of apposed bones. The abdomen of the fœtus is in the other half of the section, and a withered umbilical cord can be traced from it to the placenta. There has been a recent effusion of blood outside the amnion. As the sac communicates at this point with the hæmatocele cavity which developed shortly before death (*v. antea*), the fatal hæmorrhage probably occurred here, and, bursting the sac at this point, made its way upwards till it was checked by adhesions. The pouch of Douglas contains recently effused blood. The rectum passes upwards behind and to the left of the tumour, and is compressed till its lumen barely allows the index finger to pass. The pelvic floor projection is increased, and measures 2¼ inches (5·7 cm.)

Several of these points were not made out till after the section had thawed, when an attempt was made to dissect out the anatomical relations. The parts were, however, so matted together and the normal relations disturbed that no further information was obtained. Both of the Fallopian tubes contained blood-collections at their uterine ends, but their further course could not be traced.

This section is of great value as a clinical study. It shows that it was impossible, without exploratory incision, to diagnose during life what the condition was. The uterus was taken up into the anterior wall of the tumour; the tumour was a gestation sac, but contained practically only a placenta. It is also of pathological interest, as showing that it may be impossible to dogmatize even post-mortem as to the character of the gestation. It is *extra*-uterine, but that is all we can say about it. Clinically we can distinguish three forms of extra-uterine gestation. There is the interstitial, in which the ovum developes in that part of the tube which lies in the thickness of the wall of the uterus (*v.* Fig. 5); the tubal, in which it developes in the tube (*v.* Fig. 6); the abdominal, in which it developes in the abdominal cavity. Under the abdominal we include tubo-ovarian, ovarian, and abdominal proper. Putting the first aside as comparatively rare, we have the tubal and abdominal, distinguished by this clinical fact, that the former usually burst at the second or third month, while the latter may go on to full time. The reason for this is found in the nature of the sac: in the former it consists of a definite structure which has a limit of dilatability, and, when over-distended, bursts; in the latter it is composed of adhesions, which stretch or give way only to allow

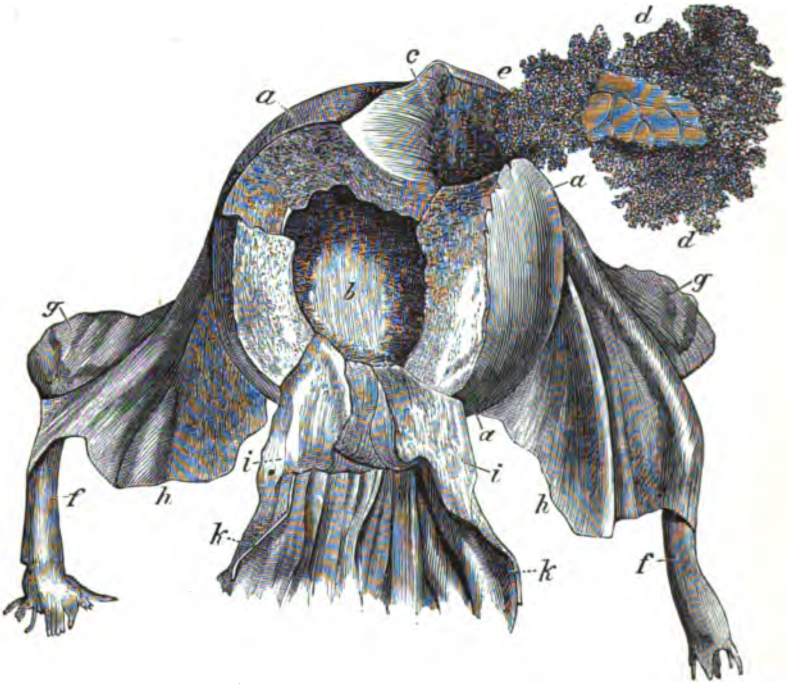


Fig. 5.—Interstitial gestation (Breschet). *a*, **Body of uterus;** *b*, **cavity laid open from the front;** *c*, **embryo sac in wall of uterus;** *d*, **ovum, with branching villi;** *e*, **place where the placenta is forming and is still adherent to the wall of the uterus;** *f*, **Fallopian tubes;** *g*, **ovaries;** *h*, **broad ligaments;** *i*, **cervix;** *k*, **vagina.**

of new ones being formed outside—thus forming a sac capable of indefinite increase in size. The clinical history of a tubal pregnancy is that the patient has amenorrhœa and thinks herself pregnant; then, often without warning, she has an attack of severe abdominal pain accompanied with collapse, and usually followed by death after some hours. In a case of abdominal gestation there may be occasional attacks of pain, due to localized peritonitis, but there is not fainting or collapse unless the sac happen to burst.

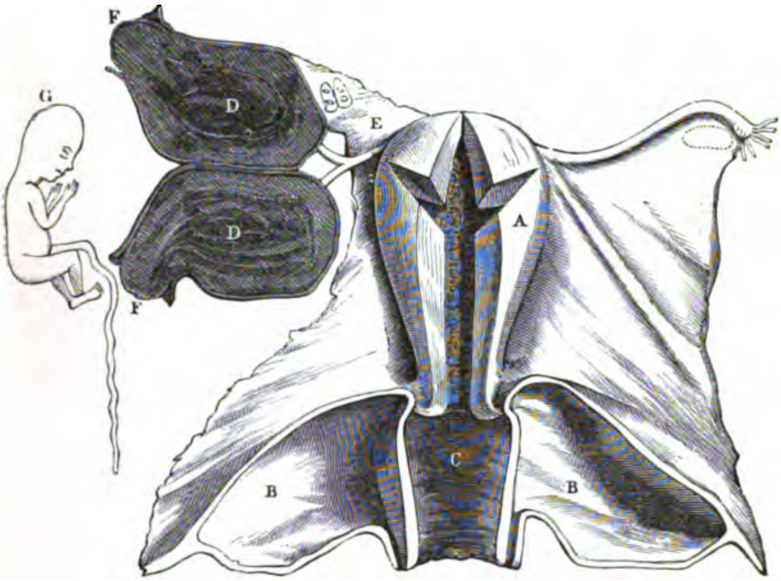


FIG. 6.—Fallopian-tube gestation, which has burst. A, uterus with decidua; B. bladder; C, vagina; D, gestation sac, which has ruptured at F; E, posterior layer of broad ligament, turned up so as to show ovary with corpora lutea; G, fœtus (W. Wilson).

Microscopic Examination. Portions of the gestation-sac wall were cut out and placed in hardening-fluid for subsequent examination. The following are the results:—

1. Section cut out of upper part of the sac wall—where it gives attachment to the placenta (Fig. 7). This shows the following structures from above downwards: fibrous tissue; layer of muscular fibre cut transversely; fibrous tissue; layer of muscular fibre cut longitudinally, and containing large bloodvessels; fibrous tissue, composed chiefly of proliferating cells, producing a sarcomatous appearance; layer of more condensed fibrous tissue with decidual cells; a few villi in patches, separated by masses of blood-clot.

2. Section cut out of posterior wall of sac where it rests on the sacrum. The sac wall is not so thick here, and consists of fibrous tissue only; from it trabeculæ pass into the placental mass, which consists of organized blood-clot with crystals of hæmatin.

3. Section cut out of inferior wall of sac, where above it is in relation to the placenta, but does not give attachment to it, below

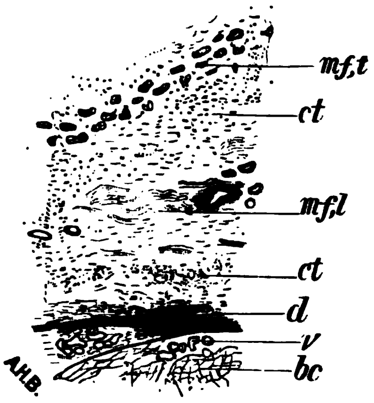


FIG. 7.—Microscopic section of upper part of wall of gestation sac. *m f, t*, muscular fibre cut transversely; *m f, l*, muscular fibre cut longitudinally; *c t*, connective tissue; *d*, decidual cells; *b c*, blood-clot; *v*, placental villi.

is free towards the pouch of Douglas. The wall here consists entirely of fibrous tissue, and contains no large bloodvessels.

The definte disposition of the muscular fibre in the upper portion of the wall of the sac shows that this part consists of Fallopian tube. To explain its absence in the other parts we must suppose that it is either a tubal gestation which has ruptured below into the broad ligament, or a tubo-abdominal which has fallen down into the pouch of Douglas. In Fränkel's case the sac wall contained in its upper part a definite layer of muscular fibre, and in its lower part adipose tissue similar to that occurring between the layers of the broad ligament. From this he concluded that the Fallopian tube had ruptured below into the broad ligament, the cellular tissue of which thus entered into the composition of the sac wall. In the case under consideration, the displacement of the uterus is different from that in Fränkel's case, and there is only fibrous tissue in the sac wall. It is most probably a case of tubo-abdominal gestation, and the history agrees with this supposition.

We have studied this case only from the standpoint of clinical diagnosis and pathology. As to etiology, we note that the patient was young, and that this extra-uterine gestation followed immediately on a series of normal pregnancies; a catarrh or stricture of the Fallopian tube leading to obstruction would, therefore, be a gratuitous assumption. As to treatment, the intimate connexion of the sac with the uterus and pelvic peritoneum made removal impossible.

ARTICLE VI.—*Parturition Complicated with Whooping-cough and Pleurisy: Recovery.* By WM. J. BEATTY, L.R.C.P., etc., Stockton-on-Tees.

(Read before the Edinburgh Obstetrical Society, 28th June 1882.)

MRS S., æt. 29, who had engaged me to attend her in her fourth confinement, sent for me on Sunday evening, 2nd July, not for her labour, but for an acute pain in the right side, which she said was like a knife going into her when she breathed or coughed. She had been attacked with whooping-cough three weeks previous, and the paroxysms were very severe; this disease being evidently contracted from her children, who all had it, as well as others in the same house.

On examining my patient, I found the breathing quick, shallow, and irregular, numbering 35 in the minute; the pulse at the same time being 110, full and bounding; temperature 102·5, diminished thoracic movement on the right side.

Percussion sounds normal.

Auscultation gave a well-marked friction sound on the right side, which became inaudible when she, at my request, ceased breathing for a time; this friction sound being confined to one small circumscribed spot in the right infra-mammary region. Face puffy, legs œdematous, urine scanty and thick, and loaded with albumen.

Before I left at 8 o'clock I examined per vaginam, and found the os undilated, but the liquor amnii was escaping.

Treatment.—Gave an opiate, put a broad bandage round the thorax to keep the parts at rest, and ordered hot fomentations to be diligently applied to the affected side, and told her friends that her labour would probably come on in a few hours, when I was to be sent for; and at 7 o'clock the next morning I found the pains strong with the head well down on the perinæum, and an hour after my arrival she gave birth to a strong, healthy male child.

She still complained of the pleuritic pain, but said she was much easier than when I left her the night before. After her delivery she improved from day to day, the breathing became more natural, ranging from 28 on the evening of the day of her delivery, to 18 on the fourth day afterwards; the pulse from 102 on the first day to 80 on the fourth. During this period the friction sound was still heard more or less, and the cough troublesome, but became less from day to day. She never whooped, and the case ended in her perfect recovery eleven days after her confinement.

Remarks.—This case caused me much anxiety, as the complications were really very formidable, and I confess I was rather surprised to find my patient recover so rapidly. Perhaps the pleurisy was cut short by the usual "loss" after childbirth, and, if so, are we right in not bleeding our patients in inflammation of the lungs or their serous envelope? Strange, too, that she lost her whoop!

ARTICLE VII.—*Case of Large Congenital Cystic Tumour of the Back of the Head. Removal; Death on Ninth Day from Convulsions.* By HENRY W. LAING, M.D., L.R.C.S. Ed., etc.

IT is on account of the rarity of the following case that I have ventured to publish it:—Mrs S., æt. 36, a tall, well-developed, but not very robust woman, was the mother of two healthy children, and on 23rd January 1882 gave birth to a small but well-developed female child with a large cystic tumour on the back of its head. In the labour, which was rapid and easy, the head presented and pushed the tumour down before it. The midwife who delivered her, from the softness of the presenting part, thought the hips were coming first, and was much surprised when a large, soft tumour escaped from the vulva, followed immediately by the head. I saw the child about an hour after its birth, and it looked like a two-headed monster, the tumour protruding behind like a second and larger head. The tumour was considerably larger than the child's head, soft and fluctuating, and rolling about whenever the child was moved. When unsupported it hung down, resting on the back between the shoulders. It was attached by a comparatively narrow neck to the occipital region, immediately above the protuberance. The investing membrane seemed to be an extension of the scalp which the tumour had drawn away from the head, and it was covered with hair for about an inch and a half beyond its attachment. It was thick and firm, like the scalp, and supplied with numerous large bloodvessels, but towards the posterior part it became much thinner, as if the sac had been stretched to accomodate the increasing contents, and at one place it was semitransparent. In colour it was somewhat deeper than the child's head, and the thin part was ecchymosed and presented a slight abrasion, which was evidently the result of pressure during labour. On palpation the tumour fluctuated freely, was not very tense, and appeared to consist of an unilocular cyst. As it could not be reduced in size by pressure, and as no opening could be felt in the occipital bone, which was well ossified, there was evidently no communication with the interior of the skull. The neck of the tumour, when grasped between the finger and the thumb, was not broader than one inch and three-quarters.

Now the treatment had to be considered, for the friends were most anxious for the immediate removal of the tumour, if possible. The propriety of immediate removal may be questioned, and the evacuation of its contents by tapping preferred. The latter would be attended with less shock, and then the sac could be removed subsequently when the child got stronger; but in those cystic tumours there is a great tendency to resecretion of fluid after tapping, even although washed out with iodine, which would be a drain on the infant's strength, and then there is the danger of suppuration even under antiseptic precautions. The bright and vigorous condition of the child, the evident discomfort caused by the mobility of the tumour, the bruised and discoloured appearance of the thinnest part of the sac, the narrowness of the neck, and the fact that there was no opening to be felt in the occipital bone, induced me to remove the tumour at once. The neck having been strangulated by three silver stitches, and the cyst punctured to allow the fluid to escape, I proceeded to cut away the sac beyond the stitches. There was no bleeding, and I dressed the wound with carbolic oil and absorbent cotton-wool. During the first four days there was a copious secretion of serous discharge; but by the sixth day it had greatly diminished, and the wound appeared to have contracted and its edges to be granulating. The child stood the operation well, but was rather fretful for the first twenty-four hours; after that it became quite bright and lively, and took the breast freely. It got on favourably till the seventh day, when it began to refuse the breast and cry frequently; after that it gradually sank, and died of convulsions on the ninth day.

The cyst contained upwards of twenty-five ounces of sero-sanguinolent fluid, which, when boiled and nitric acid added, deposited fully one-half of albumen. Under the microscope blood-corpuscles appeared to be very numerous, the fluid being covered with a thin layer of them floating in a straw-coloured fluid. The cyst was lined with a smooth membrane, on which ramified numerous bloodvessels, some of them of large size. On examination after death I found the occipital bone entire, almost completely ossified, and covered by its pericranium, upon which the remaining portion of the cyst-wall rested, but was easily separated from it. Unfortunately permission was not granted to open the head.

As a companion to my case, I have copied the following notes from Billroth's *Clinical Surgery.*[1] In his case the tumour was much smaller, and had a broad attachment to the head, which would prevent its removal and leave tapping as the only resort.

"R. W., a female child, three days old, was admitted for a congenital tumour at the back of its head. The birth had been accomplished by natural means. The tumour gave the child a two-headed appearance. The tumour was soft, fluctuating, and moderately full of fluid, so that we were able easily to satisfy ourselves that there was no opening in the skull, and that the tumour was neither an encephalocele nor meningocele. The right ulna was unnaturally short, so that the hand of that side was strongly adducted. No other deformity was noticeable. As soon as the child had become a little accustomed to residence in hospital and took its food well, I punctured the cyst and drew off five ounces of clear, light-coloured fluid. No opening could be found after puncture. The sac began to fill again slowly, but diarrhœa came on the day after the operation. This was followed by pneumonia, and the child died a week after the puncture. Post-mortem: the cyst was found to consist of a thin-walled sac with a very smooth lining. It lay in the cellular tissue beneath the scalp, and was easily removable from the bone. No opening in the skull, or defect where some previously existing communication might have been shut off, could be found."

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[1] Published by New Sydenham Society, 1881.

Unfortunately the treatment adopted was unsuccessful in both cases. I think it would have been better to have tapped the cyst first, and waited until the child was older and stronger before removing the sac. There was only one consideration which prevented me doing that, and it was the tendency which those cystic tumours have to resecrete serous fluid after being emptied. This often necessitates repeated tappings, which, even with antiseptic precautions, are not always unattended with danger. Dr K. N. Macdonald's case of congenital cystic tumour of the left side of the neck illustrates this. On the 24th July, when the child was only three days old, he tapped the cyst for the first time, and drew off a pint of albuminous fluid. On the 16th August he again tapped it, and withdrew about the same quantity of similar fluid. On the 18th October he tapped for the third time, and drew off about 24 ounces of fœtid pus. The child died from suppuration of the sac and meningitis on the 5th November, having lived for three months and a half.[1]

These fatal cases indicate the difficulties and dangers attending the treatment of congenital cystic tumours; and by recording such we may enable others to benefit by our failures, and thus contribute towards more successful practice.

ARTICLE VIII.—*The Medical Congress of Seville.* By J. BOYD, M.D., Slamannan.

IN a letter in December last from my esteemed correspondent Dr R. de la Sota y Lastra of Seville, he mentioned that, from increasing pressure of the duties of his professorship and practice, he had been obliged to discontinue the publication of his *Lecciones Medicas y Quirurgicas.* In this serial Sr. don Ramon seems to have set the aim before him of culling the essence of the British, American, French, and German medical press, and presenting it to his countrymen in an attractive guise. In this object I consider he has been highly successful. I was particularly struck with the elegance of the Spanish version of one of the last papers by the late Dr Charles Murchison, which I had read as published in the *British Medical Journal.* This recalled the author to my vivid recollection as the handsome, well-grown lad with the dark curly locks, who commenced his studies in the same session with myself, and who, in a certain upper chamber in the north-west corner of the University quadrangle, was so assiduously occupied with his scalpel, forceps, and Ellis at the table adjoining that where Sir Wyville Thomson and I were at work. One cannot but marvel at the mysterious decrees of Providence in calling away the gifted and pre-eminent when they have barely attained the zenith of their powers and fame, while we undistinguished are still spared to toil on in our narrow round.

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[1] *Edinburgh Medical Journal*, February 1881.

In the concluding part of this note Dr Sota informed me of the approaching International Medical Congress to be held at Seville on the 9th of April proximo, and expressed in the kindest and most flattering terms his wish that I should be present. A few days afterwards a formal invitation and programme of proceedings arrived from Dr Antonio Rivera y Ramos, President of the organizing commission, and Dr Rafael Tuñon y Lara, Secretary-General. Attracted by the captivating prospect, I seriously resolved to avail myself of the opportunity and gratify a long-cherished desire to visit the Iberian Peninsula; but a widely-spread epidemic among the young, and extra number of sporadic cases in the grown up, frustrated my endeavours, and obliged me to postpone my excursion. The position of the rural practitioner comes ultimately to be something like that of the fly in the flagon of molasses: the more he struggles to extricate himself the deeper he gets.

In another epistle from my able and accomplished friend, dated 28th April, along with some peculiarly interesting photographs he enclosed a journal of the proceedings of the Congress Medico de Sevilla, which, for the benefit of all Scotch doctors who would like to know how they do things in Spain, I shall analyze to the best of my ability, toning down a little the florid phraseology of the south to suit our severer northern taste.

Inaugural Session.

On the 9th of April, and in the sumptuous edifice which Philip II. caused to be constructed, latterly devoted to the preservation of our glorious grandeurs, so much the greater that they refer solely to genius and science, the session commenced under the honorary presidency of the Excm. Sr. Captain-General, having seated to his right the Excm. Señor Civil Governer of the province, the Rector of the Universidad Literaria, Dr J. Grancher; Secretary-General of the Congress, Dr R. Tuñon; and to the left the Alcalde Interino, Sr. Gallardo; the President of the Deputacion Provincial, Señor Marquez Garcia, and the President-Interina of the Congress, Dr D. Antonio Rivera y Ramos.

The Secretary, *Dr Tuñon*, read a well-written memorial on the labours which preceded the organization of the Medical Congress.

Dr Rivera read the inaugural discourse, which was elegant in phraseology and well conceived.

A committee was then formed, who, after a short conference, proposed and carried unanimously the following gentlemen nominated:—Hon. President, Excm. Sr. Presidenta del Ayuntamiento; Acting President, Dr A. Rivera y Ramos, Director of the School of Medicine and Surgery in Seville, assisted by eight Vice-Presidents.

The Secretaries appointed were, Drs Madera, Lasso, and Buissen; General Secretary, Dr Rafael Tuñon y Lara.

In an eloquent discourse, *Dr Rivera* returned thanks for his nomination, and proposed a vote of thanks to His Majesty's Government for having deigned to nominate as their special delegates to this Congress the eminent officials who had presided, which was unanimously acceded to. He also complimented the representatives of the scientific corporations, and expressed his grateful sense of the honour the Ayuntamiento by their patronage had conferred on this assembly.

After some other gentlemen had spoken, the Captain-General declared open the Congress in the name of H.M. the King; and the order of the day for next meeting being declared, the session rose.

Session of the 10th April.

The meeting opened under the presidency of Dr Sr. Rivera, and the minutes of the preceding read and approved of.

Dr D. Ramon de la Sota, who first conceived the idea of celebrating an international medical congress in Seville, manifested his deep gratitude to the organizing committee, without whose activity and intelligence his ideas could never have been realized, and asked a vote of thanks to the junta referred to, which was unanimously accorded.

Sr. Madera, the Secretary, read various communications.

Dr Morales read a paper on a bandage of his invention, which he called the vaginiform, showed it to the Congress, and pointed out the advantages the patient derived from this apparatus devoted to maladies of the reproductive organs. From its simplicity, facility of arrangement, and general convenience, it was approved of by the Congress.

In a memoir read by *Señor Valenzuela*, a dental instrument was introduced, the object of which was to replace the palatal vault.

Dr Moresco read a paper on the "Treatment of Simple Hypertrophy of the Tonsils," insisting on the utility of using interstitial injections, annulling tonsillotomy and every other surgical operation, thereby avoiding pain, hæmorrhage, and all its consequences. Srs. Ariza, Sota, and Verneuille took part in the discussion.

Dr Hausser read a "Comparative Study of Natural Nitrogenous Waters, with Determination of their Effects." He entered into a comparative study of the waters of Panticosa and Urberisaga de Ubilla, discriminating the separate maladies to which they were respectively adapted, the treatment to be carried out for cure or relief, the suitability of highly elevated localities to those lymphatic patients in the first stage of tuberculosis, and other points related to this interesting subject.

Dr Robert argued in opposition to the views of the Señor Hausser, and was of opinion that elevated situations tended to accelerate the fatal termination of the phthisis, inasmuch as a cold atmosphere depressed the peripheral circulation, and for various other reasons.

Dr Garcia Lopez, physician to the Baths of Ladisma, and *Dr Casseaux*, of those of Eaux-Bonnes of France, took part in this discussion. The former gentleman read a memoir on the above subject. He gave the chemical analysis of the springs of Panticosa and Caldas de Oviedo, the proper method of taking these waters, etc., advising excitable and nervous subjects to use the Caldas de Oviedo, and the rachitic, apathetic, and feeble those of Panticosa. After general applause, Dr Casseaux complimented Señor Garcia Lopez, and praised the waters of these localities.

Dr Manzaneque read also another paper on the same topic, and the assembly rose at 5 P.M.

Session of the 11*th April.*

Proceedings commenced at 1¼ P.M.

Señor Lasso read the minutes of the preceding day, which were approved of.

Dr D. Ramon de la Sota y Lastra read a most important and creditable treatise on the "Clinical Characters distinguishing Lepra, Lupus, and Cancer of the Fauces." With exuberant abundance of data, wonderful descriptive precision, and exquisite literary style, he enchained the attention of the Congress during the reading of the work referred to, which must henceforth be regarded as classic. The conclusions arrived at are the following:—1. Lepra always appears on the skin before in the throat; lupus and cancer exist often in this region, leaving the skin intact. 2. The lepra is preceded by a red eruption, which afterwards becomes white, without tumefaction; lupus develops itself on a mucous surface, which retains the normal characters; cancer begins by congestion, tumefaction, and malaise in the part. 3. The tubercles of lepra are white, soft, varying in size, forming a chain or rosary, with sensibility normal, diminished, or abolished; those of lupus are rose-red, hard, elastic, and resisting, larger than those of lepra, fewer and scattered, indolent in general; those of cancer are rose-red or gray, hard or soft, sessile, and annoying by the lancinating pains they occasion. 4. There is distinct tumefaction of the mucous membrane in lepra; œdema, redness, and induration in cancer; and the normal condition in the tissues surrounding the tubercles in lupus. 5. The leprous ulcers are soft, sometimes resembling those syphilitic mucous *plaques;* others are corroded or insensible. Those of lupus have the margins hard and raised, the base narrow and sinuous, causing little pain in general. Those of cancer are wide, with irregular base, covered or surrounded with papillary vegetations, usually exciting severe pain. 6. The aspect and consistence of the cicatrices of lepra and lupus are very similar, but are distinguished readily by the former being insensible, whereas the second present the sensibility proper to their local situation; in cancer there is no cicatrization, neither complete, partial, nor temporary.

Dr Ariza, a well-known specialist in throat affections, said he could not allow the opportunity to pass of felicitating Dr Sota on his memoir, which was more of a photograph than a description of the maladies referred to, in which he could find nothing to object in the slightest degree. Señor Sota had been so fortunate as to encounter so many cases of lupus in his practice as to enable him to form a description profitable to the most experienced. This he stated as lupus, as a laryngeal affection, occurred very rarely, so much so that in statistic tables, special and numerous, he had not found more than one or two instances. This is not surprising, as the diagnosis is notoriously difficult, this not being a disease specially of the larynx, as is the case with cancer, which in a primary manner evinces a predilection for this organ. This cannot be said either of lupus or lepra. Simpson alone had been able to observe a single case, and even he had only been able to diagnose it *a posteriori* when he saw the patient survived, and that the medicines administered were of no use.

Dr Sota, in an animated reply, expressed his astonishment at the averment of Dr Ariza that lupus occurred so seldom in the throat. This might happen to specialists devoted to throat affections, but not to those who unite the two branches of laryngoscopy and dermatology. The frequency with which the French and English dermatologists discovered lupus in the fauces when present in the skin is very well ascertained. He had taken good care to fix his theme as the throat, not as the larynx; and thus only could the objections of the learned Dr Ariza have become valid. It is quite different with lepra, which presents itself in the larynx, as Dr Ariza has had occasion to observe in a little patient whom he did not produce to the Congress, as in his case the laryngoscopic image only presented a small hole, the retracted cicatrices allowing nothing more. There were two cases of lepra tuberculosis available for the inspection of the associates of the Congress at the meantime if they wished, both of which manifested exactly the proper characters of the malady as displayed in the memoir.

Dr F. Rubio was happy to take part in the debate, to indicate, as one of the advantages of this Congress, the opportunity it conferred of making known what maladies were special to certain localities and certain climates. It was the misfortune of our Spain to contain a considerable number of lepers. The best treatise we possess on this subject is that of Dr Benito Hernando, Professor in the University of Granada, who discusses lepra in the larnyx at considerable length, and takes the same view as the Sr. Sota. The latter, however, has further developed and elaborated the description. In contradistinction to Dr Ariza, Sr. Rubio attributed the sufficiently large number of cases on which Dr Sota's observations were founded, not only to his combining the two specialities, but to the fact of lupus being very common in Seville. Since he left that city he had not fallen in with such cases so frequently.

Dr Ariza next read a methodical and important paper on the "Differential Diagnosis of Laryngeal Ulcers, Simple, Tuberculous, Syphilitic, and Cancerous, based on their Objective Character." The conclusions of this valuable monograph were comprehended in the following:—1. Laryngeal ulcers may be diagnosed by exclusive means of laryngoscopic examination. 2. The simple ulcers are in his opinion non-existent. 3. The true problem is fixed on the tubercular ulcers alone. 4. The resolution of which depends on the objective signs. 5. To make these really useful in diagnosis, it is necessary to condense and synthetize them in a very rapid visual inspection, which in most case we cannot possibly obtain.

Dr Sota, after acknowledging his obligations to Dr Ariza, stated that many times he had been unable to make a satisfactory diagnosis, not only from the objective character of the ophthalmoscopic image, but from afterwards having recourse to interrogation of the patient. He thought it very serious to be guided by the advice of Dr Ariza, inasmuch as in mistaking a syphilitic ulcer for a tubercular it could easily be understood how disastrous it might be for the patient submitted to a course of treatment founded on this error. He mentioned an obscure case where there was an extensive ulcer covered with red papillæ, thought to be cancerous, which was speedily cured by mercurials.

Dr Ariza replied.

Dr V. Chiralt read a paper on "The Antiseptic Method most applicable on the Field of Battle." With numerous data, powerful reasoning, and felicitous expression he developed this subject, and decided for the "*cura Listeriana,*" it being demonstrated that the disinfection of the wound from the moment of infliction is requisite to avoid those accidents known to all. He recommended the packet, weighing only 72 grammes, by which the soldier carrying in his knapsack could immediately apply the first antiseptic measures himself. This packet is made at the Fabrique International of Schaffhausen, Switzerland.

Señor Mitjabila said the benefits of antiseptic treatment on the field of battle were beyond doubt, yet he regretted that Dr Chiralt had not discussed the antiseptic method of Dr Cortezo. He argued that the good results of the Lister cure, besides the disinfectants, were due to the delay in removing the dressings. It had always been a principle of the Spanish school of surgery, the advantages of the tardy cures. He alluded to Dr Verneuil, describing a case of compound fracture where he did not remove the dressings for two months.

Dr Tuñon said he was not open to suspicion as to progress, his enthusiasm for scientific advance being well known. But among so many substances recommended as antiseptics, and, above all, the idea that the cures operated by occlusion only, and not from the substance itself, there was a confusion truly lamentable. He opposed the treatment of Dr Cortegarena by silk paper. He mentioned the treatment of wounds by exposure to free air, with reference to Señor Laborda.

Señor Tonié eulogized the advantages and economy of the "*cura clorogena de Cortezo*," which consists in merely interposing a substance adapted for the elimination of chlorine in the "*cura de Guerin*." This, being used on battlefields, is free from the objections to its use in hospitals, the insupportable chloric atmosphere, which is irrespirable.

In returning thanks, *Señor Chiralt* observed that no one had controverted the main point of his thesis.

Further discussion was prevented by deficiency of time.

In a verbal communication, *Dr Graucher* expounded his views on tuberculosis, not unknown to practitioners, and declared himself as *unicist*.

Dr Robert expressed himself as *dualist*, for these reasons:—Two well-defined clinical types existed; besides, it must be allowed that two groups of phthisis are admissible, one hereditary, another accidental, which occurred without antecedents in the midst of perfect health, resulting from a tumultuous origin, since, after pneumonia, phthisis manifested itself. At the apex of the lungs, where the circulation is neither vigorous nor abundant, the hereditary displays itself. The other is at the base of the lungs, where it is local. There is a veritable discrepancy between the clinical and the histological, since tubercle is one solely, and in so far *unity* appears logical. He believed that this would some day disappear, and that from minute details, at present undistinguished, we would come to discriminate tubercles as now cells are separated.

Dr Graucher replied, stating that what is clinically observed are different epochs of the evolution of tubercle: they are different types of tuberculosis, and not types differing.

Dr Ariza discoursed on the history of the pathological views, and referred to the doctrine of necessary incurability originating in Læennec. But now, from the advance made by the German school, it has been demonstrated that tubercle is not characteristic of phthisis. It is presented in many other maladies, such as struma, some cases of arthritis, lupus, lepra, etc. In so far it is a common process, the product of inflammation. This discussion finished, the meeting separated at 6 P.M.

Session of the 12th April.

The Secretary, *Buissen*, read minutes of the preceding session, which were approved.

Señor Gomez Torres read a memoir, "Critical Judgment relating to the Newest Modifications introduced in the Operation for Vesicovaginal Fistula by the American Method." He gave the history of a patient on whom he operated, with the best results, by this new procedure, which consists in using the cautery to freshen the edges of the fistula. This communication was the same made some time ago to the Academia Real de Medicine y Cerugia de Madrid.[1]

After a *résumé* of the discussion of the previous meeting on tuberculosis between Drs Graucher and Ariza, *Dr Maden* read a paper in French by Dr Moncervo on a case of splenic leucocythema in a child of 1½ year cured by the application of electric currents.

Dr Buissen read a well-written memoir on a case of chorea successfully treated by static electricity, amplifying on the unjust neglect of so valuable a curative agent.

Dr Mitjabila objected that the necessary apparatus was troublesome and difficult to use in practice, and said that galvanism was more advantageous, as painless and of more general applicability. In his view the essence of chorea was anæmia.

Dr Robert denied that the nature of chorea was as yet fully understood, some considering it hyperæmic, others the reverse. Some regarded it as akin to rheumatism, an unsatisfactory idea, he thought. By some it was viewed as reflex, and finally, as this malady yielded to very diverse lines of treatment, it was very difficult to study in its intimate pathology. It had been cured by electrotherapia, by hydropathy, by opiates, and by strychnine, as well by tepid baths as by cold ones.

Dr E. Gutierrez read a paper from Dr Alsiora, giving an account of an apparatus of his invention, termed *aeroscopio analizador*, with the object of facilitating the study of atmospheric dust.

By *Dr Juan de la Sota* another paper was read relating to a plan for the total extirpation of the entire uterus advanced by Dr Rubio, which consists in enclosing the entire organ between four elastic ligatures, two lateral, one anterior, and one posterior. The conclusions of this important work were:—1. In carcinoma and sarcoma of the uterus, the whole of the organ implicated ought to be removed as the only means of recovery, it being always understood that these lesions are limited to the uterus, and the absence of any cause sufficiently powerful to contraindicate the operation. 2. That in performing it we should have recourse to that of Dr Rubio, as easily and promptly executed, supporting the economy better, and being neither complicated nor instrumental, as that of other systems, especially that of Dr Freund. 3. That a tube of zinc or platinum should be applied over the elastic ligatures, with the object of seeing that we avoid the new cicatrization of the parts resected.

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[1] *Note by Translator.*—There is nothing new under the sun. The pupils of Sir James Y. Simpson in the session of 1848 may remember his history of the patient in the Crosscauseway, on whom he proposed to operate by burning the edges of the vesico-vaginal fistula, but who declined for pathological reasons. John (her husband) had procured a pig's bladder, burned a hole in it, and hung it up for some weeks, at the end of which he found on examination that the solution of continuity was as great as ever!

After some just encomiums to Dr Rubio, *Dr Gomez Torres* considered the question as to the feasibility of the operation of the extirpation of the uterus, which he thought should never be attempted, inasmuch as the operation is undertaken either from the presence of benign tumours, the bulk of which compromise the life of the patients, or from there being malignant tumours, and other methods are requisite. In the first case extirpation is unjustifiable. There are many other means available—electricity, injection of ergotin on the parenchyma of the tumours, etc. In the second, where malignant tumours appear to call for the amputation of the organ, there is to be considered the difficulty of diagnosis with regard to these, especially when small, precisely when the best results might be hoped from the operation. But in order to verify this it might be frequently necessary to resort to laparotomy, and what woman would submit to it at the period when such cases most usually occur amongst those who call least for the resources of our art? Besides, what surgeon would decide on so formidable an operation merely to ascertain whether a small tumour was malignant or not? In a more advanced stage, that is, the last period of the evolution of malignant tumours, when the patient has a mournful consciousness of her condition, then comes the anxious petition for an operation. Unfortunately it is too late for her, and science cannot accede to her wishes, since if extirpation of the uterus be adopted, it is placing the woman in the utmost danger, without any security as to a favourable result, as we all know how fatally malignant neoplasms are reproduced all throughout the system, and, in his opinion, with the greatest probabilities in the uterus. This organ, he said, was very rich in lymphatic vessels, so much so that one anatomist has compared it to a ganglion. How cancer spreads by the lymphatics is well known, and therefore there is no reason for extirpating the uterus, inasmuch as the degenerated pelvic ganglia would be the most deadly point of departure of reproduction.

Dr Rubio made a brilliant refutation of the foregoing ideas. When medicine, he said, has no further resources to overcome certain maladies, the aid of surgery is invoked to alleviate or cure. He made a rapid sketch of the advances of modern surgery, pointing out that at first it was barely bold enough to amputate the mamma or excise some superficial malignant ulcers. Later on, in accordance with anatomical progress, courage was gained to attack more important organs and more delicate tissues. One thing is to be remembered, that with every step of chirurgical advance objections similar to those stated by Dr Gomez Torres were made; but in spite of these progress was made, and operations formerly condemned had been included in the dominion of the science. The extirpation of the uterus and the larynx are still in the stage of dispute. As regards the latter, the results have silenced opposition; the surgeon is rarely accused now of rashness so far as they are concerned. Fortunately, in the statistics of uterine excision some cases have been saved. Spencer Wells had one cured. The saved are truly few as yet, and there are cases of the reproduction of the malady; but that is its characteristic. But what about the mamma? Is it not now amputated where there are well-grounded fears of the relapse? One thing is certain, that this operation, such as it is performed by the known methods of proceeding, lacks not the condition of executability, whether performed by the vagina or the bowels. *Per vaginam* the work is done in the dark. It is a chance whether it ends well or ill. The ventral operation is still very difficult. He met with many obstacles on the two occasions he had performed it by the method of Dr Freund. One of the points recommended by authors was that the intestines should be pushed upwards by means of warm flannels. This is practicable only in ovariotomy, because, in consequence of the volume of the cyst, the abdominal parietes are accustomed to distention. The same occurs in bulky fibro-myomas, but in small ones this manœuvre is not easily accomplished. The two or three hours required for the execution of any of the methods known as yet, keeping the intestines exposed, give rise to a collapse, often fatal, from the prolonged duration of the operation. Before such enormous difficulties we must confess inability to obtain good results by the known plans of operating, and we must endeavour to imagine another proceeding to obviate these inconveniences. He disagreed with Señor Torres as to the abundance of the lymphatic vessels of the uterus, it being equally rich in bloodvessels and nerves. As to the propagation of cancer, one thing is to be remarked, that there is not the same law of reproduction in all the regions of the organization, since in one the lymphatic way is chosen, as happens in mammary and other cancers, while in the uterus it is propagated by means of the tissues, that is to say, cell by cell, it invades the adjoining parts.

Etiology and Characters of New Forms of Hæmoptysis.—Dr Robert made a lucid verbal communication on this interesting pathological point. He described two forms of hæmoptysis,—due, one to the presence of tænia, and the other to spinal irritation,—both operating by reflex action, determining certain alterations of vaso-motor nerves of a given region, and enlarged on the difficulty of diagnosing the presence of the parasite. The pectoral examination in these cases gave negative results, nor was the quantity or quality of the blood extruded more instructive. In the cases observed the discharge was periodical; in females menstruation appeared rather to aggravate it. It does not seem to enfeeble the patient much, he having seen some afflicted by it for four years without sinking. During the attacks the heart is the centre of a hypercinesis subject to the same causes. Treatment the same as in other forms of the malady in question.

Dr Osio's communication was "Two Words on the Regulations for Enrolling Soldiers." He stated that forbidding the absence of one eye as a reason for military exemption was an offence to science and humanity. It should not be left to the caprice of examiners to fix the visual acuteness—this point should be settled by reference to a known scale, and that hemeralopia and astygmatism should be included as exemptory. He averred that the secure means of investigating the condition of the eye that we now possess ought to be made available, not the large or middling types of letters, which is most unscientific. After some discussion, the proposal to petition Government for the reform of the standing regulation of the "quintas"—balloting recruits—as regards ophthalmology, was withdrawn as unnecessary, as the "Cuerpo de Sanidad Militar" was sufficiently alive to its duties and required no such stimulus.

After *Señor Tonié* had read a memoir from Dr Peña on "Neurotomy Optico-ciliary for Removing Sympathetic Ophthalmia," a paper creditable to its author,

Dr Robert made a verbal address on the therapeutical study of hypodermic injections. He stated he had applied them with satisfactory results in cases of hydrothorax. One of the advantages of the hypodermic method was that medicines thus applied passed into the torrent of the circulation without being metamorphosed in the liver, as is the case with ingested medicines. He concluded,—1st, the collection must not be of long standing—of ten weeks at most; 2nd, that there be hydrothorax, not empyema; 3rd, that there be no organic resistance to encounter.

Dr Casaux believed that pilocarpine was one of the drugs destined to be born, live, and die. He had heard Jacoud say that the physicians in Brazil had given up the use of it. He thought that the cures of hydrothorax were a mere coincidence—that it disappeared of itself.

Dr Robert replied, giving great importance to jaborandi, in which he was followed by Dr Hauser, who referred to cases in his own practice.

A petition from Drs Aycart, Mitjabila, and Martin was made to the Congress to appoint a special session for the complete discussion of the different modes of antiseptic treatment of wounds as one of the most important points of surgical science, and was agreed to, and the session terminated at 12 P.M., having began at 1.

(*To be continued.*)

ARTICLE IX.—*Statistics of Operations in Mr Bell's Wards, Royal Infirmary, Edinburgh, during the Summer Session* 1882.

DURING May, June, and July, Mr Bell performed sixty-five operations, with the pleasing result that all have been successful.

There were four amputations. That of the thigh was for gelatinous degeneration of the knee-joint in a very weakly and strumous girl of 17. Both apices were somewhat dull, and her liver slightly enlarged. Before operation her temperature was never less than 102°. After operation it fell to 98°·6, and remained normal till the wound healed, with the exception of one day about six days after the operation, when it rose to 101° again, caused by some bagging of the stump. Except this she never had a bad symptom, and went home five weeks after operation, her chest symptoms having almost disappeared.

The amputation of the penis was for epithelioma in an old man of 84. It was done with the thermal cautery, and after the slough separated the wound healed well, though somewhat slowly.

Of the twenty-four tumours operated on, the sarcoma of the thigh was an interesting case. It had been first noticed eight months before, and had been growing steadily ever since, and when the patient, a woman aged 53, came to the Infirmary, it had attained the size of a cocoa-nut, and so interfered with the muscles that she was unable to walk. As it was feared that the bone was involved, leave to amputate, if necessary, was obtained before operation. After careful dissection, however, it was got away. During the operation a branch of the femoral was cut close to its origin, and was tied with a silk ligature, which came away after a fortnight.

The case of sarcoma of an undescended testicle was also an interesting one. Mr Bell made it the subject of a communication to the Medico-Chirurgical Society, which was reported in the July number of this Journal.

Stretching the ulnar nerve was performed in a case of progressive muscular atrophy of the right arm. The patient, a man aged 66, had injured his arm six months before, since when the muscles had wasted, and he was greatly troubled with twitchings and tremors of the muscles. The operation was done antiseptically, the wound was only dressed twice, and after it was healed the patient expressed himself as being almost entirely relieved.

The operations were as follows:—

Amputations.

	No.	Recovered.	Died.
Thigh	1	1	0
Forearm	1	1	0
Thumb	1	1	0
Penis	1	1	0
Total	4	4	0

	No.	Recovered.	Died.
Excisions.			
Elbow	1	1	0
Metatarso-phalangeal Joint	1	1	0
Total	2	2	0
Tumours.			
Fatty	2	2	0
Sebaceous of Eyebrow	4	4	0
Cystic	3	3	0
Scirrhus of Breast	6	6	0
Cystic of Breast	3	3	0
Sarcoma of Thigh	1	1	0
„ of Undescended Testicle	1	1	0
„ (Cystic) of Face	1	1	0
Epithelioma of Lower Lip	1	1	0
„ of Lower Eyelid	1	1	0
„ of Ear and Cheek	1	1	0
Total	24	24	0
Operations on Bones.			
Necrosis of Tibia	1	1	0
„ of Lower Jaw	1	1	0
Carionecrosis of Metatarsus	1	1	0
„ of Metacarpus	1	1	0
For Ununited Fracture	1	1	0
Total	5	5	0
Operations on Tendons.			
Talipes Varus	1	1	0
Hamstrings	1	1	0
Total	2	2	0
Operations on Face.			
Harelip	2	2	0
Lupus	3	3	0
Total	5	5	0
Operations on Genito-Urinary Tract.			
Lithotomy	1	1	0
Vesico-Vaginal Fistula	1	1	0
Dilating Urethra and Scraping Bladder	1	1	0
Phymosis	2	2	0
Paraphymosis	2	2	0
Radical Operation for Hydrocele	1	1	0
Tapping Hydrocele	5	5	0
Total	13	13	0
Operations on Rectum.			
Fistula in Ano	4	4	0
Hæmorrhoids	3	3	0
Total	7	7	0

Various.

	No.	Recovered.	Died.
Ulnar Nerve Stretched	1	1	0
Ingrowing Toe-Nail	2	2	0
Total	3	3	0

Summary.

	No.	Recovered.	Died.
Amputations	4	4	0
Excisions	2	2	0
Tumours	24	24	0
Operations on Bones	5	5	0
„ Tendons	2	2	0
„ Face	5	5	0
„ Genito-Urinary Tract	13	13	0
„ Rectum	7	7	0
Various	3	3	0
Total	65	65	0

Part Second.

REVIEWS.

Psychiatrie und Psychiatrischer Unterricht, Rede gehalten zur Feier des Stiftungtages der Militairärztlichen, Bildungsanstalten am 2 *August* 1880. Von Prof. Dr C. WESTPHAL. Berlin: 1880.

The Teaching of Psychiatric Medicine. By T. S. CLOUSTON, M.D., Physician-Superintendent, Royal Edinburgh Asylum; Lecturer on Mental Diseases, Edinburgh University. London: J. H. Kolckmann: 1881.

Combe Trust Health Lectures on Disorders of the Mind. By D. YELLOWLEES, M.D., F.F.P.S.G., Physician-Superintendent of the Glasgow Royal Asylum, Gartnavel, and Lecturer on Insanity in the University of Glasgow.

THE address of Dr Westphal was, as indicated by the title, delivered at the College for Military Surgeons, and Dr Clouston's paper was read at the Section for Mental Diseases at the International Medical Congress held at London in August last, and appeared amongst the other articles published in the four big volumes of the proceedings of the Congress. Dr Clouston's paper led to an interesting discussion, which, we think, he might prudently have reproduced at greater length in this reprint. Nothing seems more reasonable than the general argument that some provision should be made for teaching the symptoms and treatment of insanity in the regular medical curriculum. Surely every well-educated physician should know how to treat the consequences of cerebral disease. It is the ordinary medical attendant who is generally consulted on the first symptoms of mental derangement; and if he apprehends the matter correctly, and his advice and treatment be judicious, his patient may be saved from a dreadful malady, going again into the world without the disagreeable necessity of being confined in an hospital for the insane. Asylum treatment is not fitted for all cases of lunacy, and, as Dr Clouston observes, it is the duty of the physician to determine not only whether the patient is insane, but whether he is a fit person to be detained in an asylum. It certainly looks very strange that, in a nation so jealous of personal liberty as we are, any person can be immured in an asylum for an unlimited time on the certificate of two medical men, while the law takes no means of insuring that these medical men are competent to pronounce on the facts and nature of insanity; but such is the case, for if the certificate be regular in form the magistrate gives his order as a matter of course. Professor Ball of Paris remarked that the English make a great talk about the dangers of people being wrongly confined in asylums, while they are indifferent or unwilling that medical men should have opportunities of learning to recognise the symptoms of insanity.

Dr Clouston tells that the young men who resort to his lectures "have no pressure or inducement whatever to take out the class of mental diseases, except a desire to know something of the subject. No question is ever put on the subject for the degree, the class is not needed for anything, the University authorities do not recommend them to take it out, I am not an examiner in any subject, they never see me till they come to the class, and they have to pay me a fee of three guineas for the course."

In the discussion which took place at the Congress, a speaker remarked that he was surprised to find that one of the most eminent consulting physicians in London seemed well acquainted with the symptoms of general paralysis, which was ascertained to have been owing to this gentleman having once attended Conolly's lectures! As the matter stands, we suppose medical men gradually pick up some notions from the cases of delirium or insanity that come in their way. In large towns they may get the advice of experts; in the country they do as best they can. Medical men in the army or navy, and in passenger ships, or in the colonies, must often feel the loss of having no preliminary knowledge of insanity. The East India Company required a certificate of three months' attendance in an asylum for those to whom they gave commissions as assistant-surgeons; but after the amalgamation of their army this regulation ceased to have effect. As Dr Westphal observes, insanity is not uncommon with soldiers, and the stirring events of war are very liable to bring out tendencies to mental derangement. In a machine like an army, which requires such stern order and precision, it is of great importance that the medical staff should be able to detect the earliest symptoms of insanity in the officers.

Distressing events have sometimes followed where this was not done.

Dr Westphal well observes that psychiatry is not a speciality, like the department of the oculist, aurist, and dentist. In studying insanity one has to deal with a class of symptoms which are new and different from the ordinary facts of disease, and which, if not duly studied, form a defect in medical education much more serious than ignorance of the diseases of a special organ like the eye or ear. The method of observation and investigation of mental symptoms is different from the usual exercises of medical diagnosis, and must be learned separately. In the case of the insane we have not only to deal with deranged mental symptoms, but also with disordered motor and sensory functions, such as restlessness or hyperæsthesia, partial or general convulsions or paralysis, or with deficiency of the co-ordination of muscular actions, constituting, along with the mental disturbances, groups of symptoms of great clinical importance. He truly remarks that mere knowledge of or practice in other departments of medicine does not help a man much to approach these problems. The ordinary physician often takes up an incorrect idea of deranged mental manifestations. In truth I might say, goes on the Professor, that it is precisely these medical practitioners and physiologists who, on their own ground, are the most exact inquirers, that are the most inexact whenever they have to do with the description and appreciation of diseased mental conditions. Though usually disinclined to the deductive method, they now think themselves entitled to judge *a priori* of deranged mental appearances. Mixing up inferences from the real or supposed character of the patient with views derived from ordinary psychology, they come to conclusions quite opposed to actual experience. The clinical observer of mental disease takes another method. At the outset he sees a series of bewildering representations of mental derangement; but it soon becomes clear to him that these diseased manifestations have nothing to do with the former tenor of the patient's conduct when he was still sane, but that they indicate something quite new and peculiar. Further experience enables him to group the mental symptoms along with the motor and sensory disorders, and sometimes with the known causes, and thus to construct characteristic types of insanity.

Like any other innovation, the teaching of psychiatric medicine must to some extent interfere with old arrangements. The objection that the medical curriculum is already so crowded that it is difficult to make room for anything new is not without weight. It may seem quite reasonable, and indeed it is quite reasonable, to say that the curriculum is filled up with studies of much less real importance. Displace the ornamental or superfluous for the useful and necessary. Surely it is better that the student should learn what he ought to know and to keep ever in remembrance, instead of being obliged to load his memory with what he neglects and forgets whenever he has obtained his degree and regained his mental freedom. Let us fill up the four or five years with a wider study of surgery and medicine, gained by a little less chemistry, botany, and natural history. On looking over the questions in the *University Calendar*, they seem to task the memory more and more. Instead of involving new and wider generalizations, as we might expect from the march of science, they seem every year to go farther from the general into the domain of the particular, to leave laws for details that not even a chemist, unless also a lecturer, would try to keep in his memory. The old pedantry of the Latinists and Hellenists was bad enough, but not so bad as the pedantry of zoology and botany, with its dull divisions into natural orders and sub-orders and families, many of them most unnatural, representing not the realism of nature, but the nominalism of the classifying intellect. But then those who wish to introduce the study of psychiatric medicine naturally do not wish to excite opposition by trying to displace subjects which have already a prescriptive place. Moreover, our studious young men are prodigal of mental labour, and value a degree guarded by a difficult examination and where a good percentage of candidates is regularly rejected.

It would take us too long to consider the questions which were discussed at the Congress, whether lunatics should be exposed to the gaze and scrutiny of students of medicine, and whether the managers of the great asylums about London and elsewhere would allow these institutions to be thrown open for purposes of medical teaching. We certainly agree with Dr Clouston that, where possible, the instruction should be clinical. "For real use to the student," he writes, "for interest to him at the time, for the permanent impressions left on his mind, we must look to this. Here he gets the facts of Nature at first-hand seen by himself. Here he is brought as a physician face to face with a new disease affecting the supreme part of man, and it never fails to interest him. Here he gets the first real glimpse and realization of these great medico-psychological and medico-social questions relating to the connexion of mind and morals with organization and brain. If any teacher could impart to the student clinical instruction in a case of mental disease commensurate with its real interest, every student would flock to his class."

The managers of asylums generally are, and should in all cases be, representative of enlightened public opinion; and if this were exerted they would have in the end to listen to it. Dr Westphal tells us that the Prefect of the Seine long held out against lunatics being exposed to be seen by the students, as, unlike the patients in the ordinary hospitals for the sick, they were taken into the asylums without their own consent. This is true in one sense, though in reality it is poverty, hunger, and neglect that force men into the hospitals. At any rate, the opposition of this powerful functionary has been ineffectual. In Paris, in New York, in most of the German universities, as well as at Edinburgh, Glasgow, Aberdeen, and most of the principal schools of medicine in England, clinical instruction can be obtained, but nowhere is it compulsory on the student.

In the pamphlet under review Dr Clouston also gives his experience of the best means of teaching psychiatric medicine. We are pleased to learn that he is composing a text-book on insanity viewed in the clinical aspect, which, from his mature experience, known thoroughness of character, and literary culture, cannot fail to be useful both to the student of medicine and to the hard-working practitioner who has no time to wander on the wide fields of medical psychology.

Dr Yellowlees's lecture on the disorders of the mind, which was delivered to a popular audience in the City Hall of Glasgow, is remarkable for good sense and a happy choice of language. Even those well acquainted with the subject must enjoy the judicious manner in which it is treated. Take the following passage as a specimen:—

"For some persons, indeed, the prevention of insanity should have commenced generations ago, that the heritage of an unstable brain might have been averted; but the results of this heritage may be greatly modified by careful training and watchful self-control. Just as the inheritor of a rheumatic tendency must not sit in wet clothes, as the inheritor of a consumptive tendency must not neglect an ordinary cold, so the inheritor of an unstable brain best averts mischief by looking the danger in the face, and by shaping his life, in its occupations and duties, its anxieties and indulgences, with this tendency honestly in view—not as a bugbear to be dreaded, but as a risk to be calmly recognised and carefully averted. Such a man should choose a calm and unexciting occupation, which will permit leisure for exercise and peace of mind for sleep. He must not set his heart on commercial triumphs, nor worry himself with political strife, for he cannot bear the strain they entail. He must moderate his indulgences as well as his aims, and he of all men should be a total abstainer. Agitation and excitement, whether of joy or sorrow, soon become injurious to him, and he must avoid whatever unduly strains or exhausts his sensitive brain."

The prevention of insanity is a subject which Dr Yellowlees might treat at large, and no one could do so better than he from his practical sagacity, kindly sympathy with human nature, and comprehensive views. He ought, of course, more particularly to explain where this quiet Arcadian life is to be found. It is cheering to know that after vainly seeking for it in the outer world the inheritor of an unstable brain may at last find it in an asylum. Dr Yellowlees thus answers the question, Are the patients happy? "In some of them sadness is essentially their disease, while others again are insanely happy; but taking the average run of asylum patients, I am sure they are quite as happy as outsiders. The conditions of their life are as healthful as possible; they are never oppressed by toil, nor exposed to inclemencies of weather; their food and clothing meet all reasonable wants, while books and amusements are always within their reach. Against the fact of their residence, which debars them from family pleasures, they have the other comforts of existence without the weight of its burdens."

We observe that Dr Clouston expresses the same opinion in one of his annual reports, so it may seem very bold for us to differ; but we have a misgiving that these eminent physician-superintendents are labouring under a deception inherent in their position. It cannot be imagined that they should have a fresh feeling of all the woes and discontents of their patients, any more than that a physician should make himself perennially miserable because he goes daily to see the sick and the dying. They pass their whole lives in trying to make those under their charge as comfortable and happy as possible; and just as old men who have young wives generally believe that these ladies are very fond of them, because they are very attentive to them and get them everything money can buy,—for young women never marry poor old men,—so these benevolent superintendents think that the insane are happy in the best possible of asylums because all their material wants are thoughtfully supplied. Happiness, as Aristotle writes, consists in virtuous energy. A man is happy who exerts all his faculties and gratifies all his desires in a liberal and healthy manner, who knows how to choose the mean and avoid extremes; and such happiness at least cannot be the portion of one who has met with so deep a misfortune as to lose his reason. Our observation of lunatics has possessed us with the idea that they often suffer intensely and have commonly little enjoyment in life, and we do not see why what we believe to be the real state of things should not be rightly apprehended.

The Practitioner's Handbook of Treatment. By J. MILNER FOTHERGILL, M.D. Second Edition. London: Macmillan & Co.: 1880.

FROM its large sale this work would seem to supply a desideratum to the profession, and in so far it is beyond all criticism. We are willing to leave it so, sure that it must be useful in its own way. It aims at giving a scientific basis for treatment, and to some extent it does so, though want of accuracy in execution sadly mars the excellence of the plan. We wonder very much where Dr Fothergill gathered that Dr Graves "first recommended" the use of iodide of potash in aneurism. So far as we know Graves never mentioned the two in conjunction.

On the Bile, Jaundice, and Bilious Diseases. By J. WICKHAM LEGG, F.R.C.P., etc. London: H. K. Lewis: 1880.

THIS portly tome contains the fullest account of the subjects of which it treats in the English language. The historical, scientific, and practical details are all equally well worked out, and together constitute a repertorium of knowledge which no practitioner can do well without. The illustrative chromo-lithographs are beyond all praise.

The Collected Works of Francis Sibson, M.D. Edited by W. M. ORD, M.D. 4 Vols., with Illustrations. London: Macmillan & Co.: 1881.

DR SIBSON'S very important works *On the Situation and Structure of the Internal Organs under Varying Circumstances of Health and Disease*, and on *Medical Anatomy*, have made his name to be known and revered wherever medical science is studied. There is no other work which can replace the former memoir, now reprinted from the obscure *Provincial Transactions*, where it first appeared; and though there are now-a-days various atlases of medical anatomy, many of them more elaborate, yet there is none handier or more reliable than Sibson's. Sibson's paper on "Pericarditis" was only recently published in Reynold's *Cyclopædia of Medicine*, and is full of detail, yet somewhat antiquarian in its interest, especially in regard to treatment. Many of the other papers, especially that on the "Mechanism of Respiration," are well worthy of perusal, and together these collected papers show an amount of well-considered and carefully executed work of which any man might well be proud. The book is well printed, the illustrations are beautifully executed, and the whole work is admirably got up, forming a very handsome memorial of a most excellent man who was well worthy of the honour bestowed on him.

Tropical Dysentery and Chronic Diarrhœa, etc. By Sir JOSEPH FAYRER, M.D., etc. London: J. & A. Churchill: 1881.

THIS is a collection of various lectures and papers on tropical diseases and other cognate subjects, such as the rainfall of India, and the best means of preserving health in India, the bael fruit, etc. No one can write with more authority on these subjects than Sir

Joseph Fayrer, and though the book is unduly swelled with unnecessary details of cases, it will nevertheless be found to present a valuable compendium of our information on the subjects on which it treats.

Relapse of Typhoid Fever, especially with Reference to the Temperature. By J. PEARSON IRVINE, M.D., etc. London: J. & A. Churchill: 1880.

A Treatise on the Continued Fevers. By J. A. WILSON, M.D. Low's Library. London: Sampson Low, Marston, Searle, & Rivington: 1881.

IN all the wide range of medicine there is no subject more interesting than that of continued fever; and of all the continued fevers there is none more important, from its prevalence, its severity, and the impartiality with which it attacks rich and poor alike, than typhoid fever. Of all the many troubles and uncertainties which make up the anxieties of a case of typhoid, or, as we prefer to term it, enteric fever, there is, perhaps, none which it is more important to recognise than a relapse. Because this must be differentiated from sequelæ following the primary disease, from complications lingering after it, or from what is often termed recrudescence. This little book is an original and most valuable inquiry into the whole subject, bearing especially upon temperature as a means of diagnosis. It is sad to think that the author just lived to see it through the press, and died before he obtained the well-earned applause which his work has since received. His death is a loss to science and to his fellow-men.

Wilson's work is a well-digested, concise history of all the continued fevers, including dengue, which, from the varying character of its eruption, the author sees no reason for relegating to the exanthemata. This concise account of these fevers is fairly well done, and brought quite up to the present day. It wants, however, the breadth and fulness usually found in special works, and reads more like the chapters on fever cut out of a handbook of practice of physic and elevated to the dignity of a special volume. For those students and junior practitioners who consider this sort of thing sufficient we can cordially recommend it.

Hay Fever: its Causes, Treatment, and Effective Prevention. By C. H. BLACKLEY, M.D. London: Baillière, Tindall, & Cox: 1880.

THIS book contains the results of numerous experiments undertaken with the view of determining the nature of the cause of hay fever, and, if possible, discovering a mode of prevention. We cannot find anything novel in the work, and there is certainly nothing either novel or effective in the treatment, while there seems to be no discoverable prevention. We are not disappointed; the less so, perhaps, that the author leans to the triturations and dilutions of our old friend the great "doppelkopf" Hahnemann.

The Student's Guide to the Practice of Medicine. By M. CHARTERIS, M.D. London: J. & A. Churchill: 1881. Third edition.

Elements of Medicine. By A. H. CARTER, M.D. London: H. K. Lewis: 1881.

Outlines of the Science and Practice of Medicine. By W. AITKEN, M.D., etc. Second edition. London: Charles Griffin & Co.: 1882.

SOME one must buy these little books, otherwise they would neither be published, nor would they run through so many editions. These three vary somewhat in character; Charteris's little book is perhaps as good a little introduction to medicine as could be put into the hands of a junior student, and the clear and graphic woodcuts are a great help to such an ignoramus. Carter's book has no woodcuts, and loses something thereby; it is a little fuller in detail, but stands otherwise much on the same basis. Aitken's work is nearly double the size, and is much more complete in every way; it is not perfect, in some respects it is improved, but in others the errors of the former edition are reproduced with an obstinate determination which is characteristic.

Diseases of the Nervous System. By THOMAS BUZZARD, M.D. London: J. & A. Churchill: 1882.

THESE able lectures are from the hand of a master, one who need not be ashamed of his work. It is not a general work on diseases of the nervous system, but a series of full and masterly clinical lectures upon special subjects. Some of these are of exceptional interest, such as those on the tendon reflex, on tabes dorsalis, which constitutes ten out of the twenty-five lectures in the book, and is very full and complete on every point, as well as that on the differentiation of hysterical paralysis from myelitis, which is of exceptional interest, and treats of many facts not so generally known as they ought to be. We cordially recommend this work to all practitioners as one of great practical value.

Paracentesis of the Pericardium. By J. B. ROBERTSON, M.D. Philadelphia: Lippincott & Co.: 1880.

AN exhaustive monograph on a subject of great interest, the only one on the subject, full and complete on every point.

Abridged Therapeutics. By W. N. SCHUSSLER. London: Elliot Stock: 1880.

A CONCISE manual of homœopathic therapeutics, of no value whatever.

A Practical Treatise on Sea-Sickness. By GEORGE M. BEARD, M.D. New York: E. B. Treat: 1880.

WE daresay it will be new to most of our readers, that in sea-sickness there is often neither sickness nor vomiting, but mainly headache and mental depression, far worse to bear than any sickness however severe. This little brochure contains a full account of the *mal de mer* drawn from personal experience, reasoned on by an enlightened and scientific mind. Like a lady's letter, the gist of it is in the postscript, for there Beard gives a letter from his friend Dr Hutchison, containing what he believes to be a perfect specific: ten grains of bromide of sodium and one-tenth of a grain of powdered ipecacuan in half a tumblerful of water, one teaspoonful every ten minutes. Five or six teaspoonfuls often suffice, and it has not yet failed. It is also useful in the functional vomiting of pregnancy.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Vol. I. Washington: 1880.

EIGHT hundred and eighty-eight pages bring this catalogue only down to Berlinski; from this we learn the fulness and importance of the work. Its usefulness is incalculable. It is not a complete bibliography, only a list of those works contained in one single collection, one not by any means complete, but as large and full as perhaps any other. Sixty-seven closely printed, double columned, large quarto pages, full of titles merely of works and papers on aneurism alone, rather take one's breath away. We wonder how many pages would contain a really complete bibliography of the subject?

Report of the Medical Officer of Health for the Local Government District of Ventnor, *for the Year ended* 31*st December* 1881.

Dr **Woodford** has been able to present a very clean bill of health for the year 1881 to his Local Authority. In a population of 5684, the deaths have not been more than 104, which is equivalent to a mortality rate of 18·3 per thousand. But when we consider that, of these 104, 49 occurred among strangers, many of whom went to Ventnor hopelessly ill, the death-rate for the inhabitants will be reduced to 9·8 per thousand; "so low," the medical officer remarks with justifiable pride, "that few towns in the kingdom can bear comparison with it." Phthisis, as might be expected, is the cause of the large majority of the deaths. Forty-nine people died of it during the year, 42 being visitors and 7 inhabitants. Only 2 deaths were registered as from typhoid fever. Besides these only one other case was known to the Authority. Statements regarding zymotic disease would, however, be much more valuable if a system for the compulsory notification of such cases (similar to what we have in Edinburgh) were introduced and enforced by the Local Authority. A very good addition to the report, and one that should be looked into by intending visitors, is a list of houses to which sanitary certificates have been given. It is not asserted that other houses are insanitary, but those which are certificated have had additional works executed in them, which were advised by the Board over and above what they had power to order.

The Medical Digest, or Busy Practitioner's Vade-Mecum; being a Means of readily acquiring Information upon the Principal Contributions to Medical Science during the last Thirty-five Years. By Richard Neale, M.D. Lond. Second Edition.

Dr **Neale**'s work is not one that lends itself to adverse criticism. It must rather call forth feelings of admiration at the unflagging industry of the author, and gratitude to him for giving it to the profession in the form he has done. It is not till one has examined the book for himself, and used it, that he begins to see how really valuable it is both to the busy practitioner and the medical *litterateur*. The "Digest," however, does not come to us as an untried work. It has been in the hands of the members of the Sydenham Society for the last five years, and to it many of them have owed much both in the treatment of their patients and in the preparation of their papers. For the book is really what it claims to be, a digest, and not a mere index; and thus facts and statements from the body of an article, instead of the mere title, are inserted and classified. Even though the journals to which references are made are not at hand, "a vast amount of useful, and in many cases novel, information will be obtained" from it. Take, for example, the treatment of diphtheria. Under the head of preventive remedies we find a list of six drugs, with references to articles on their use. Under general treatment a similar list of twenty-eight drugs, etc., is given; while over thirty are mentioned as having been used locally. Numerous examples of a similar nature might be given; but it is better that the practitioner should possess himself of a copy and give half an hour to the study of it. We venture to think that once he has done so it will find a permanent place, not on his book-shelves, but on his consulting-room table.

Medical and Surgical Aspects of In-Knee (Genu-Valgum): its relation to Rickets, its Prevention, and its Treatment with and without Surgical Operation. By W. J. LITTLE, M.D., F.R.C.P., assisted by E. MUIRHEAD LITTLE, M.R.C.S.

SURGEONS who give their attention to Dr Little's monograph will, we think, agree that it is a most valuable contribution to the literature of orthopædic surgery. In a small and very readable volume there is given the experience of a long life devoted to the study of this and other deformities of the human body. The varieties, pathology, symptoms, and treatment of in-knee distortion are each taken up in detail and discussed in a masterly manner. On two points especially the author's teaching is very emphatic. These are, first, that there are many varieties of in-knee, of which the rachitic is by no means the most important; and second that the very great majority of cases of this affection can be either prevented or easily and successfully treated without recourse being had to the more severe operative procedures.

Former writers, if they made any classification of cases of genu-valgum at all, usually divided them into rachitic and statical. This division, for very good reasons, as it seems to us, Dr Little sets aside, putting in its place another classification, which, though apparently more complicated, is more scientific. Cases are divided, first, into those in which in-knee distortion is the only knee affection, and second, those in which it is a prominent, though not the most important feature. The latter class includes (1) the paralytic and spastic forms "arising from partial paralysis or spasm of the muscles moving the knee-joint;" (2) the rachitic, in which the curvature of femur and tibia plays "as important a part in the deformity as the articular knee structures, if not a more important part;" (3) those due to long-continued rheumatic, strumous, or traumatic synovitis. In the first class are placed two forms: (1) the atonic, (2) the accommodative. The atonic may be due to a variety of causes which "operate by lessening the tone or strength of some or all of the active and passive structures of the joint itself,—the muscles, the ligaments, and the bones." The accommodative is due to a single cause, "a previously sound knee having accommodated itself to a short opposite, or to a weak, wasted neighbour." Having thus classified them, the pathology and morbid anatomy of each is taken up. Good reasons are given for the belief that the chief proximate cause of the in-knee distortion, in atonic cases at least (and these are by far the most numerous), is not to be found in enlargement of the internal condyle, but in a deficiency of the external condyle from its "undue contact with the opposing part of the tibia, and consequent arrested development or deterioration of these parts."

The section on treatment is perhaps the most interesting part of the work. Dr Little puts great faith in treatment by mechanical means without recourse to operation. In a very large experience (both private and hospital) he has met but "two cases which had been successfully rebellious to restoration so far as the actual knee inversion was concerned." In children under two or three years of age proper manipulation on the part of the mother or nurse has generally proved sufficient to effect a cure in a short space of time. After infancy and in severer cases splints or irons are required. These, by judicious application, are made to overcome the deformity gradually. Dr Little lays stress, and rightly, too, on the fact that while this treatment is being carried out the knee should be kept fixed in an extended position. It is the more important to observe this as some surgeons, having noticed that when the knee was bent the inversion disappeared, have recommended that the limbs should be confined in this flexed position. They have, however, found to their cost that on straightening the limb again the inversion reappeared. One of the great advantages of the mode of treatment recommended by Dr Little is that the patient is not confined to the house, walking exercise in moderation being permitted. Where mechanical appliances do not succeed, Dr Little prefers osteotomy to the more violent "redressement forcé" or section of tendons or ligaments. Of the various operations for osteotomy he considers Dr Macewen's the best.

Having said so much in praise of this most deserving work, we do not think we will be considered hypercritical in saying that the contradictions regarding Jules Guerin's teaching on pp. 31 and 33 might have been better rectified than by a footnote at p. 107, hung on to an interesting discussion on undue hairiness in rickets, with which it has not the slightest connexion. The index, also, might have been made a little more complete. With these exceptions, the work is exceedingly well got up. The printing is clear and good, and the illustrations greatly help the text. Altogether, it is well worth the study of practical surgeons.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., M.R.C.P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital, etc. Second Edition. London: H. K. Lewis: 1882.

THE author states in his preface that the "object of this work is to give plain, straightforward directions for the treatment of the commoner poisons," and this desirable object has been accomplished by Dr Murrell. This little work has much to commend it to the members of our profession. It embraces most of the poisons, and the directions are, on the whole, accurately and succinctly stated.

The first part of the work relates to the "Antidote Bag." He recommends every medical practitioner to have in his possession a bag containing all the requisites in a case of poisoning; and certainly, if this advice was universally acted upon, many cases of poisoning would be more efficiently, because more promptly, treated. Dr Murrell's advice is a good one: "The antidote bag should be to the toxicologist what the midwifery bag is to the obstetrician. It should always be kept filled and ready for use, so that in case of emergency the doctor would have simply to take or send for his bag, and would not have to look for stray bottles or instruments at a time when every moment is of importance." We have much pleasure in heartily commending this advice to the notice of the profession.

This bag should contain — I. Instruments.—Stomach-pump, hypodermic syringe, and a flexible catheter, No. 8. II. Emetics.—Sulphate of zinc, ipecacuanha, and apomorphia. III. Stimulants. IV. Antidotes. V. Hypodermic injections and a galvanic battery.

With regard to the contents of the bag we very much agree with Dr Murrell, except when he recommends ipecacuanha as an emetic in cases of poisoning. We very much question if any case of poisoning can occur in which ipecacuanha could be preferred to the sulphate of zinc. Again and again Dr Murrell recommends ipecacuanha in cases of poisoning, and that, too, where most toxicologists would regard ipecacuanha as contra-indicated, as in cases of poisoning by aconite. Ipecacuanha is essentially a depressant, and is an emetic which takes longer to act than the sulphate of zinc, and we are at a loss to understand why it holds such a prominent place in this very excellent book.

"What to do" under each poison is very clearly and fully stated. In some cases the desire to be explicit has led the author to some unnecessary repetitions; for example, what to do in poisoning with aconite and belladonna is given on pages 16 and 17, and again repeated on pages 26 and 27 under belladonna and aconite. In like manner, the treatment for poisoning by hydrocyanic acid is given on pages 55 and 56, and again on pages 81 and 82 under prussic acid. Notwithstanding these minor defects, the book is one which will be of great value to every medical practitioner.

Foods: their Composition and Analysis. A Manual for the Use of Analytical Chemists and Others; with an Introductory Essay on the History of Adulteration. By ALEXANDER WYNTER BLYTH, M.R.C.S., F.C.S., etc., Public Analyst for the County of Devon, and Medical Officer of Health and Public Analyst for St Marylebone. London: Charles Griffin & Co.: 1882.

WE have much pleasure in commending this book to the notice of our readers. The work is an exhaustive treatise on foods, their composition and analysis, and will prove of great value not only to analytic chemists, public analysts, and medical officers of health, for whom the book is specially written, but to every member of the medical profession Mr Blyth's book will prove both interesting and instructive.

The "History of Adulteration," which occupies the first part of the volume, is clear and concise. Part 2 describes the special forms of apparatus useful in food analysis—the microscope, the spectroscope, and the art of photography as applied to the chemistry of food; and the mineral matters or "ash" of food. Part 3 is occupied with the "carbo-hydrates," as sugar, confectionery, honey, treacle, jam and preserved fruits, starch, wheat, flour, bread, oatmeal, barley, rye, rice, maize, millet, potato, peas, lentils, and beans. Part 4 is occupied with milk, cream, butter, and cheese. Part 5 contains tea, coffee, and cocoa. Part 6 treats of alcohol, spirits, wines, etc. Part 7 treats of vinegar, lemon juice, and lime juice. Part 8 treats of condiments, such as mustard, pepper, etc. Part 9 relates to the important subject of water. The appendix contains the various laws bearing on the adulteration of food. The book contains numerous and appropriate illustrations.

The book deserves a place in the library of every medical practitioner.

The Etiology, Pathology, and Treatment of Baldness and Grayness. By TOM ROBINSON, M.D., Physician to St John's Hospital for Diseases of the Skin. London: H. Kempton: 1882.

AT this dull season when town is empty, and one feels fagged and longs for a holiday, we cannot be grateful enough for the satisfaction of a hearty laugh. If, then, when reading Dr Robinson's little work, we have been betrayed into unwonted hilarity, he is, we are sure, much too good a fellow to be angry, even though the laugh has been at rather than with him. None but a jovial mortal could poke fun at his readers as he does. One's best wish is that he may never be bald or gray. We have heard lately of the unsanitary state of Brighton, but a much more serious charge is brought against the Queen of Watering-Places by our author. "It has also been stated," he says, "that baldness is more common at Brighton, and its vicinity, than at other places." Those, therefore, who wish to acquire "an aspect of greater wisdom and discretion" (p. 8) know where to go. Speaking of the cause of baldness, he remarks, "Either the falling off is the result of general debility consequent on severe illness or the result of local disorder. In either case the chief cause will be found in a defective circulation, *and very often with a different colour.*" The italics are ours, the meaning of the sentence we do not profess to unravel. We are told, p. 29, "that fat is the chief cause of the colour of the hair. This fat is equally distributed upon the cortex of the hair; alkaline substances dissolve the grease and discolour the hair. Fatty substances in the form of pomatum render it a little more coloured. The direct cause of the colour of the hair is the action of the sebaceous glands, which supply the fat to the superior portion of the hair follicle. We may thus better understand the cause of sudden blanching. Dark hair contains little air. Light hair, besides possessing fat, contains a large quantity of air. Kölliker places the seat of the air in the medullary canal, whilst other physiologists say it is distributed between the cortical cellules. The coloured fat is thus the positive cause of the colour of dark hair." We need not attempt to make a description, in which gas and oil play so important a part, any more luminous to our readers. What we need at present are precise and exact observations as to the cause of baldness and grayness on which to build a rational mode of treatment or prevention. To these, however, the work before us makes no new contribution.

Transactions of the Grant College Medical Society. Bombay: 1880–1881.

We have on previous occasions noticed the excellent work which is done by the Grant College Medical Society, composed chiefly, if not entirely, of native medical practitioners.

The first paper contains the annual address of the president, Dr J. C. Lisboa, whose excellent communications we have before noticed favourably.

The Society deserves great praise for the efforts they are making to induce the Government to pass a Medical Registration Act similar to the one in this country, and we wish them all success.

Mr Dadabhai Jamasji's "Notes of a few Surgical Cases which he had treated in the Prince of Wales's Hospital at Jumkhundy" will be read with great interest.

There is another paper of much interest by Dr M. B. Colah, in which he gives an account of a peculiar dropsical affection which prevailed during the early summer months of 1879 in Jamboosar. This disease appeared in a very limited area, and was mainly confined to villages on the seaside, and abruptly ceased about six or seven miles inwards. The leading symptoms were fever of several weeks' duration, mostly of the intermittent type, with anæmia, general œdema, with swelling of the whole body, especially of the face, legs, and feet; ascites, dyspnœa, with constipation and scanty secretion of urine. The liver was enlarged, but not the spleen. The general belief was that it was due to the drinking of bad water, giving rise to malarious or similar kind of fever, which brought on subsequently enlarged liver, anæmia, and dropsy. We have much pleasure in bringing under the notice of our readers the Transactions of this Medical Society.

On the Average Weights of the Body and Brain. Compiled from Dr Boyd's Researches. London: J. & A. Churchill.

This is a table, about 18 inches long, on stiff pasteboard, ready to be hung up on a nail, of the average weights of the body and brain in the insane at different ages. The brain weights are taken from the observations of Dr Boyd in nearly a thousand cases. The weights of the hemispheres on each side of the cerebellum, pons, medulla, encephalon, and spinal cord, as well as of the principal organs in the thoracic and abdominal cavities, are separately given. The weight of the body appears from this table to be greater in the insane; the weight of the brain in males to be somewhat less; and the left cerebral hemisphere is a little heavier than the right. We are not sure whether this last observation will hold good against a greater average, as we know of further observations which seem to negative it. Altogether the table is a handy and useful one for reference at a post-mortem examination, recalling facts which are apt to slip out of the memory.

At the foot of the table is the following note:—"Are Women inferior to Men? In height the women were 4·3 inches less than men, the average height of men being 5 feet 6·7 inches, and of women 5 feet 2·4 inches. From Table II. it appears that the weight of the body, on the average of the whole, was 22·9 lbs. less in women than men. The proportion that the encephalon bore to the weight of the body in men was one thirty-seventh, and in women one thirty-second. The right cerebral hemisphere was 1·85 ounce less; the left cerebral hemisphere 1·88 less; the cerebellum, ·23 less; pons and medulla, ·1 less; and the encephalon, 4·1 ounces less in women than in men. The circumference of the head, ·8 inch less; antero-posterior ·31, and transverse measurement ·33, less in females than in males. Broca notes that the female cranium is longer than the male; also that the brain of man is heavier than that of women as 111 to 100. According to my statistics it is as 109·7 to 100."

We give further publicity to this observation of Dr Boyd, as he evidently thinks it one that should be enforced by being hung up on the wall. We can fancy the housemaid, caught by the title, commencing to read it, but her curiosity gradually getting worn out by the mixture of anatomical details and arithmetical relations. On the whole, we do not think the advocates of new female rights will be satisfied till we can separate the parts of the brain used in thought or sensation from those used in directing or inciting the muscular apparatus, and then weigh each against each. Even then the defeated sex might have something to object.

Part Third.

MEETINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING X.

Wednesday, 31*st May* 1882.—Professor SIMPSON, *President, in the Chair.*

I. *The President* read a paper on HYDRAMNIOS AND THE SOURCE OF THE LIQUOR AMNII, which appeared at page 33 of this Journal.

Dr Peter Young drew attention to the composition of the liquor amnii as given by Scherer. Previous to the fourth month it contained a much larger proportion of phosphates, carbonates, and albuminous matter; it might, therefore, in the early months of pregnancy, serve as a source of nutrition to the fœtus. As the proportion of saline matter was small, it seemed to be a secretion rather than an excretion. It also prevented the rapid decomposition of the fœtus after death.

Dr Croom said that the Fellows were obliged to the President for bringing this difficult subject under their notice. The fact that the liquor amnii did not contain the constituents of urine was no proof that it was not secreted by the kidney. It might undergo chemical changes in the amniotic cavity. There were several arguments in favour of the theory that it was a renal secretion. Urine was occasionally found in the urinary bladder of the fœtus at birth. The fœtus often passed water shortly after birth. In a case of impacted breech-presentation he had observed that micturition took place before the head was born. Perhaps the examination of twins, with and without hydramnios, might throw light on the matter.

Dr Craig held that the question was not whether urine might be discharged into the liquor amnii, but whether the kidneys were the source of the liquor itself. Cases were reported in which external genitals were not developed (that is, where the kidneys did not communicate with the exterior), and yet liquor amnii was present as usual; one case like this was fatal to the renal theory. As to anencephaly, hydramnios was often found without that condition. He had seen two cases of hydramnios within three months, in both of which the cord presented; both were multiparæ and sisters.

The President said that the presence of hydramnios in one twin showed that the cause of the condition was probably fœtal, but the amnion was itself a fœtal structure. Whatever the relation of hydramnios to anencephaly might be, it was a well-observed fact that the two were often associated. In Dr Croom's case, the fact that the labour had been going on for some time would account for the action of the kidneys. It was a hardly tenable supposition that the nutrition of the fœtus was promoted by the liquor amnii; the fluid was not at all of a nutritive composition, and the interchange between the fœtal and maternal blood in the placenta was a sufficient source of nutrition. Liquor amnii was always present whatever might be the condition of the fœtus, even when it was shrivelled up so as to be scarcely recognisable, or had melted completely away.

II. *Dr Peter Young* read a paper on GRAVIDITAS SEROTINA ET PRÆCOX, which appeared at page 108 of this Journal.

The President said that the Society was indebted to Dr Young for the interesting cases which he had recorded. The menstrual type had not been referred to in calculating the period of gestation. He had seen several cases in which this had produced a distinct effect, and Dr James Gairdner of Crieff had collected and published in the *Glasgow Medical Journal* a series of cases which established this fact. Dr Young's first case was the most remarkable; he noted that the child was large and the labour difficult. Sir James Simpson had related a case of protracted gestation where the patient, during early pregnancy, had been exposed to great anxiety and danger in a burning ship.

Dr Croom held that the only test of protracted gestation is the weight of the child. The well-authenticated fact that menstruation occurs in the early months of pregnancy shows that it is of no value in calculating the duration of gestation. He had observed that in some cases of protracted gestation the membranes were universally adherent to the walls of the uterus, a condition in protracted gestation to which his attention had first been directed by Professor Simpson.

Dr Gordon said the impossibility, in the present state of our knowledge, of determining the date of conception made all calculations as to the duration of pregnancy doubtful.

MEETING XI.

Wednesday 28*th June* 1882.—Professor SIMPSON, *President, in the Chair.*

I. *Dr Barbour* showed for Dr H. W. Laing a LARGE CONGENITAL CYSTIC TUMOUR from the back of a child's head, an account of which will be found at page 230 of this Journal.

II. *The President* showed a PAROVARIAN TUMOUR of unusually large size. It had been tapped seven years ago, and again eighteen months ago. As it had filled up again it was removed.

III. *The President* showed the OVARIES which he had removed that morning from a patient suffering from dysmenorrhœa. The operation was unusually difficult, as one of the ovaries was so firmly bound down that it could not be brought up to the abdominal wound. A ligature was placed round it with the intention of leaving it to atrophy *in situ;* as this ligature cut into the ovarian tissue, there was no alternative but to bring the ovary forcibly upwards, and place a ligature lower down. The patient stood the operation fairly well. [The patient died on the sixth day after the operation, of peritonitis.—A. R. S.]

IV. *Dr Barbour* showed the UTERUS from a patient who died of phthisis two and a half days after delivery, to be made the subject of a future communication.

V. *Dr Chapman* showed some small CALCULI, about the size of small peas, which he had found embedded in the tissue round the urethral orifice. They were apparently concretions which had formed in the glands, or had found their way outwards through the urethral wall. The patient suffered from complete incontinence of urine, her bladder being fixed and rendered quite incapable of dilatation by the remains of a former pelvic inflammatory attack, which had ended in an abscess opening through the abdominal wall.

VI. *Dr Hart* read the following NOTE ON THE NAKED EYE ANATOMY OF THE FEMALE EXTERNAL GENITALS:—The point I wish to clear up is easily understood. In the anatomical descriptions of the external genitals, the fourchette and labia minora are stated to be mucous membrane. Anatomists have described them thus, in error, owing to the fact that the external genitals in the cadaver soon get altered, and have a misleading appearance to the naked eye. In the living female, however, it can be readily seen that the fourchette is skin and that the labia minora are also skin. If I am asked on what I base this statement, I reply that to the naked eye these structures have the appearance of skin; and, further, that the line of separation between skin and mucous membrane can be clearly seen not to include them. Hilton has already noted that at the anal aperture the line of separation between skin and mucous membrane is perfectly distinct, and he terms it the white line. This line is of great importance in determining the fact as to whether piles are external or internal. If the external genitals be looked at carefully, we can trace the line of demarcation between skin and mucous membrane as running along the base of the inner aspect of each labium minus, and passing into the fossa navicularis, separating its skin boundary, the fourchette, from the mucous membrane over the hymen. While Garriguez has drawn attention to the error in the statement that the fourchette is mucous membrane, no one, so far as I am aware, has pointed out the true structure of the labia minora. Turner, however, has described them as muco-cutaneous. The exact relation of the external genitals to one another is of interest. The labia majora have their under surfaces in contact, whatever posture a woman may assume. The labia minora are also in contact, and the fossa navicularis is artificially made when the fourchette is hooked down. This exact apposition of the external genitals has, of course, a protecting influence on the sensitive organs.

The President thanked Dr Hart for drawing the attention of the Fellows to this point in anatomy. Though it might seem of small moment, it might be of pathological importance in explaining warts and other growths on the nymphæ. Since Dr Hart had directed his attention to this point, he had examined several cases, and could confirm Dr Hart's observation.

VII. *The President* read his communication on A CASE OF EXCISION OF THE CANCEROUS UTERUS, which will appear in a future number of this Journal.

Dr Wilson expressed regret at the unfortunate termination of this case.

Professor Byford of Chicago asked for the President's opinion as to the propriety of operating even in favourable cases, remembering the possibility that the diseased tissue might be removed only in part, or might recur at no distant period.

The President thought that the cases were few in which it was desirable to operate. On the other hand, there were cases in which the operation was distinctly indicated—when the disease was limited to the mucous membrane, or when there were no deposits in the connective tissue, or when the uterus was not greatly enlarged. If there was deposit in the cellular tissue the operation was entirely excluded.

Dr Craig remarked on the absence of pain in some cases as preventing the patient from seeking advice till operative treatment was impossible.

Dr Chapman thought that the operation depended upon our being able to diagnose carcinoma at an early stage, so as to operate before the pelvic glands were affected.

Dr Barbour remarked on the three modes of the spreading of carcinoma of the cervix—downwards into the vagina, outwards into the connective tissue, and upwards into the uterus. Cases of the last type, which were comparatively rare, are the only ones fitted for extirpation of the uterus.

Dr Hart drew attention to the anatomical relations of the uterus as being peculiarly favourable to extirpation *per vaginam*. The fact that the uterus can be easily drawn down, its loose attachments to the bladder and the rectum, the absence of intestine in the lowest part of the pouch of Douglas and in the vesico-uterine pouch, made removal easier.

Professor Byford thought that carcinoma does not begin as a distinctly localized deposit. He had never had a case in which he had diagnosed carcinoma until the whole cervix was thickened. He had not met with the localized hard nodule in which it was often said the disease originated.

Dr Sutton, Pittsburg, described fully Professor Schrœder's method of extirpating the uterus *per vaginam*. After incising the mucous membrane of the anterior fornix, he separates the tissue with the finger-nail. He then cuts into the pouch of Douglas posteriorly, passes the hand over the uterus, so as to divide the peritoneum of the utero-vesical pouch upon the finger; he ligatures each broad ligament with a double ligature before cutting away the uterus. After closing the ends of the wounds in the fornices with ligatures, which, at the same time, fix the pedicle, he passes a drainage-tube into the wound, introducing a pencil of iodoform along with it. Billroth, before ligaturing the broad ligaments, fixes them temporarily in long, flat forceps.

The President congratulated the Society on the presence of Professor Byford and Dr Sutton at their meeting, and thanked these gentlemen for their contributions to the discussion of the evening.

Part Fourth.

PERISCOPE.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By William Craig, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

Medical Use of Figs.—Professor Bouchut speaks of some experiments he has made, tending to show that the milky juice of the fig-tree possesses a digestive power. He has observed that when some of this preparation was mixed with animal tissue, it preserved it from decay for a long time. This fact, in connexion with Professor Billroth's experience in a case of cancer of the breast so excessively foul-smelling that all his deodorizers failed, but which on applying a poultice of dried figs cooked in milk was entirely free from odour, gives an appearance of usefulness to this homely remedy (*New York Medical Record*).—*The Therapeutical Gazette*, May 1882.

Ergot in Diabetes.—Professor Da Costa reports six cases of diabetes insipidus treated with ergot, with five recoveries. The remedy is given in the form of fluid extract, and not less than three fluid drachms per day, and this amount should be gradually increased to double its quantity. It may be well to follow the ergot after the amount of urine has been reduced to the normal, with strychnia. In other cases where the ergot must be continued for some time, cod-liver oil is a good adjunct (*Medical News*).—*The Therapeutical Gazette,* May 1882.

BERGENIN.—An investigation into the physiological and therapeutical properties of the various species of saxifrage, especially *S. siberica, S. cardifolia,* and *S. crassifolia,* has been carried on for some years by Drs Garreau and Machelart. In the stems of these plants there is, besides tannin, a hitherto unknown body, which it is proposed to call "bergenin." It is obtained by first extracting the tannin by means of ether, and then treating the plant with pure alcohol. Bergenin is a whitish, translucent substance, having the bitter taste of caffein and quinine. It crystalizes from alcohol in tetrahedral crystals; but from a watery solution in prisms. It has no action of polarized light. At the temperature of 140° C. it loses an atom of water and runs into a colourless or amber-coloured fluid, which forms, when it cools, a translucent mass, and this gradually, by contact with the air, resumes its lost atom of water and is transformed into tetrahedrons. At the temperature of 300° C. it is decomposed into a variety of carbohydrates. It has a slightly acid reaction, and by dilute nitric acid it is transformed into oxalic acid. It forms soluble salts with potash, lime, baryta, and magnesia. Analysis shows that it has the formula $C_6H_8O_3H_2O$. It is said to be a valuable remedial agent, having a stimulant and tonic action on the nervous system. It is placed therapeutically between salicylic acid and quinine. The parts of the plant which contain it possess the same properties, with, in addition, an astringent action, from the large quantity of tannin they contain (*Lancet,* November 1881).—*The Therapeutical Gazette,* May 1882.

CHLORINATED OIL IN SCABIES.—At the American Hospital for Skin Diseases, chlorinated oil, a yellowish oily fluid prepared by passing chlorine gas into olive oil, has been found to be a most decided parasiticide, more particularly in scabies. In this affection a piece of cotton is saturated with the chlorinated oil and applied night and morning. The preparation is also used in other cutaneous diseases (*Medical Bulletin,* Feb. 1882).—*The Practitioner,* Aug. 1882.

SULPHATE OF ATROPINE IN THE TREATMENT OF CORYZA.—Atropine exercises upon the mucous glands the same influence that it does on other glands. It diminishes their secretion, and in a very short time dries up the mucous membrane of the nasal cavity. In affections of the nasal passages characterized by fulness with increased vascularity and hyper-secretion, a pill of half a milligramme (0·0077 grain) of sulphate of atropine in a very short time exercises a potent and specific effect. In about a quarter of an hour the sneezing ceases, the nasal secretion abates, the swelling of the mucous membrane rapidly diminishes, and respiration is much relieved. Usually a single dose suffices, but occasionally the medicine must be repeated (*Lyon Medicale*, 25th June 1882, etc.)—*The Glasgow Medical Journal*, August 1882.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Aural Vertigo.—Aural or auditory vertigo, as its name would indicate, is a vertiginous condition due to an irritation of the auditory apparatus. This irritation, usually in the form of pressure, may be situated either in the external, the middle, or the internal ear, or in or upon the auditory nerve within the cranial cavity. Though originating in the different parts of the organ of hearing, this irritation, in order to produce vertigo, must be exerted ultimately in the form of pressure upon the terminal filaments of the auditory nerve in the semicircular canals, and thence conveyed to the cerebellum. Some observers hold that all disturbances in equilibration, as manifested in giddiness, are due either to a temporary or a permanent lesion in the labyrinth. In fact, some hold that the semicircular canals are vertiginous centres. Dr Burnett, while not prepared to accept this theory, holds that in the semicircular canals there is found a very sensitive medium of communication of impressions to the cerebellum, and hence that these canals may be considered as in many respects presiding over the equilibrium of the body. In this very instructive and interesting paper our author treats of the structure of the auditory nerve, and tell us there are two kinds of fibres—the motor fibres, distributed to the ampullæ of the semicircular canals, and connected with the bulb and the inferior peduncles of the brain. These fibres pass into and are continued in the inferior peduncles of the cerebellum. The inferior peduncles of the cerebellum connect it with the medulla oblongata, pass on backwards to the back of the medulla, forming part of the restiform bodies, and are then connected below with the corresponding half of the cord, excepting the posterior median columns. Another set distributed to the utriculus, the sacculus, and the cochlea, which are accepted as purely sensory. The auditory nerve originates from numerous white striæ—the lineæ transversæ—which emerge from the floor of the fourth ventricle, and that it is also connected with the gray matter of the medulla. Now, the fibres of the pneumogastric nerve may be traced deeply through the fasciculi of the medulla, to terminate in a gray nucleus near the floor of the fourth ventricle; so that anatomically the auditory nerve and the pneumogastric are thus shown to be at least contiguous at their origin. He then proceeds to the anatomical causes of tinnitus aurium, symptoms, differential diagnosis of the forms of aural vertigo, giving an illustrative case of external ear vertigo, as recorded by Fabricius Hildanus, of a young girl 18 years old, who besides the ear-vertigo, exhibited atrophy of one arm, epileptiform symptoms, and even anæsthesia of one-half of the body,—all of which were cured by the removal of a glass bead or ball from the external auditory canal, where it had exerted pressure either upon the drumhead, or irritation of the walls of the meatus. The mode of irritation in most cases of external ear vertigo is by pressure upon the drumhead, and mediately by means of the ossicles and the labyrinth-water upon the filaments of the auditory nerve in the ampullæ of the semicircular canals, or by the auricular branch of the pneumogastric nerve found in the external auditory meatus. The impression is conveyed to the inferior cervical ganglion, to which the vagus sends a branch. From this ganglion the irritation is deflected to the vertebral plexus; the inhibitory power of the plexus is overcome, and vessel dilatation ensues in the vertebral artery. This causes an increase in the blood-supply to the labyrinth, and the latter is in a measure engorged, and the labyrinth-water having no adequate means of rapid escape, is compressed within its bony cavity. This compression is of course quickly felt by the nerve filaments in the ampullæ of the semicircular canals, they are compromised and vertigo ensues. Then we have middle ear vertigo and internal ear vertigo described; the causes acting more directly upon the nerve filaments in the ampullæ of the semicircular canals. Central ear vertigo is a form of ear vertigo which is due to a tumour of the auditory nerve. Central ear vertigo dependent upon morbid growths in the auditory nerve is never sudden, but slow in its onset. The deafness and tinnitus, as well as the vertigo, are comparatively slight at first, but then steadily increase, and are always permanent from the time they first show themselves until the end. The gait is permanently altered, though it may be only slightly changed at first, and the tendency is to fall towards the affected side. In true internal ear vertigo, in which the initial lesion is in the labyrinth in or very near the semicircular canals, the deafness is sudden, profound, and permanent, but the giddiness and falling are paroxysmal. In middle ear vertigo, in which the deafness and tinnitus are great, the deafness is not sudden or profound, the vertigo comes on in attacks, and there is no permanent alteration in gait. With able paragraphs on the history of this disease, its clinical history and symptoms, and the treatment of aural vertigo, Dr Burnett in conclusion tells us he has brought before us the following facts:—1. That there are two sets of fibres in the auditory nerve, the sensory and the motor. 2. That the motor filaments are connected on one side with the cerebellum by means of the inferior peduncles, and on the other side with the nerve filaments sent to the ampullæ of the semicircular canals. 3. That irritation of these ampullar nerves may be conveyed from either of the three parts of the auditory apparatus, or from the auditory nerve itself, in the mechanical form of pressure, and that this irritation may be further conveyed to the cerebellum and cause vertigo; so that it logically follows that this reflex cerebellar phenomenon as produced by aural irritation should receive the general denomination of *aural vertigo*, and that Ménière's disease is only a form of aural vertigo. Hence the latter name, unless used after accurate diagnosis, of a disease originating in the labyrinth, *i.e.*, in the semicircular canals, will create confusion. But it should be said in justice to Ménière, that, so far as the writer knows, he has never claimed a general application of his name to all forms of aural vertigo. It has been so applied only by well-meaning but inaccurate diagnosticians.—(Charles H. Burnett, A.M., M.D., Aural Surgeon, Presbyterian Hospital. Read before the Philadelphia County Medical Society, Feb. 8, 1882).—Reprinted from the *Philadelphia Medical Times* for June 3, 1882.

CASE OF AURAL VERTIGO.—Dr Ringwood reports the case of sub-constable Forbes (at Kells), who was tried on a charge of drunkenness preferred against him on 21st October last. The charge arose from the head constable and sergeant observing Forbes to stagger and reel while on duty. Concluding he was slightly under the influence of drink, they brought him back to barracks, when, the transient attack of giddiness having passed away, he appeared to his comrades to be, as he really was, perfectly sober. Dr Ringwood, on seeing him about two hours afterwards, found him suffering from the well-marked symptoms of aural vertigo—noise and hissing in his left ear, numbness behind the ears and down his left arm, depression, occasional vomiting, giddiness, objects going to the left side, the drum of the ear inflamed, and the left Eustachian tube plugged, and no symptom of recent slight intoxication. At the inquiry the head constable and sergeant swore that in their opinion sub-constable Forbes was drunk while on duty. Four policemen who were with him said that he was perfectly sober. Dr Sparrow, a fellow-practitioner of Dr Ringwood in Kells, agreed in evidence that the giddiness was the result of illness, not of intoxication. Dr Ringwood explained that the giddiness and reeling had resulted from an attack of ear vertigo, and that this might easily be mistaken for the staggering caused by slight intoxication. The Court decided that the charge was proved, and fined sub-constable Forbes three pounds, which fine has since been confirmed by the House of Commons. That disease of the ear could give rise to reeling and giddiness is evidently looked on with the greatest scepticism by the general public. The Court refused to accept Dr Ringwood's explanation, and the idea was received in the House of Commons with loud laughter; and the general press, in their comments on the subject, have looked on the idea as a rather good Irish medical joke. That Dr Ringwood's explanation was the correct one is clearly proved by the subsequent history of the case. Sub-constable Forbes, continuing to suffer from symptoms which were too protracted for those of drunkenness, was summoned before a medical board in Dublin, and sent on afterwards to St Mark's Eye and Ear Hospital, where he remained for some time under treatment for the identical disease for suffering from one of the symptoms of which he had been already fined. There is no doubt that in this case ignorance of the effects of ear disease has led to unmerited punishment, and is another proof of the ill results of ignoring medical evidence in such investigations. —*British Medical Journal*, 5th Aug., p. 210.

DISTURBANCES OF HEARING AND EQUILIBRIUM RESULTING FROM EPIDEMIC CEREBRO-SPINAL MENINGITIS. (Ueber Meningitis Cerebro-Spinalis Epidemica, insbesondere über die nach derselben Zurückbleibenden combinirten Gehörs-und Gleichgewichtsstörungen). Moos, Heidelberg, 1881, 68 pp.—For the last eighteen years Moos has recorded the cases of the disease which he has seen in his practice, and now analyses them in an interesting pamphlet of sixty-eight pages, discussing the ætiology, age, sex, various symptoms, complications with other diseases, sequelæ, etc. Of the 64 cases, about 50 per cent. showed disturbances both of hearing and equilibrium; 38, or 59 per cent., were totally deaf in each ear, and consequently deaf mute; 20, or 31·4 per cent., were totally deaf, but retained their speech at the time of the last examination; 1 only, or 1·5 per cent., came out of the disease with perfect hearing. Those patients left with a hearing for the higher tones, but with a dulness or absolute deafness for the lower tones, according to Moos, stand a better chance for understanding speech than when the converse is found. The staggering gait is referred by Moos to changes in the semicircular canals and their ampullæ. As established facts Moos gives the following:—1. The centre of the sense of equilibrium is in the cerebellum. 2. The ultimate nervous apparatus in the ampullæ, possibly also in the saccules, is in connection with this centre by means of nerves. 3. Disease or irritation of this ultimate apparatus, or of tissues in its neighbourhood, may produce the same symptoms as a disease or irritation of the central organ itself. This is true of the symptom of dizziness. 4. Unilateral labyrinthine affections, whether they occur primarily or by extension of disease from the skull, manifest themselves by dizziness. 5. If in the same patient the other side becomes affected, the new disease begins with dizziness, and is followed soon by a staggering gait. 6. Unilateral sudden paralysis of the nerves of the ampullæ produces no dizziness. 7. The same rule holds good in regard to destruction of the nervous apparatus of the vestibule when it occurs in chronic disease. 8. Bilateral, acute, hæmorrhagic, or purulent inflammation of the nervous ampullar apparatus, with permanent paralysis, especially when the result of cerebro-spinal meningitis, produces a long-continued staggering gait. Children, and those adults who have also trouble with the eyes, are affected more severely and for a longer time. As soon as the muscles and eyes become accustomed to acting independently the staggering gait disappears. For the treatment of the dizziness and staggering, Charcot's method, with quinine, was chiefly used—beginning with thitry centigrams, and increasing gradually till one gram was taken daily. Quinine was used for one month, then the treatment interrupted for a fortnight, and then resumed again for another month.—*American Journal of Otology*, No. 3, vol. iv.

MACROSTOMA, BRANCHIAL FISTULA, and ACCESSORY AURICULAR APPENDAGE.—Mr F. A. Southam showed a male child seven months old affected on the left side of the face with these deformities. The auricular appendage was situated just in front of the ear, which, with the exception of being slightly elongated, was in other respects normal. Just in front of the appendage was the branchial fistula, which ran directly inwards towards the cavity of the mouth, but did not communicate with it. The macrostoma, a fissure at the angle of the mouth, was well marked; and from its extremity a distinct cicatricial line ran directly to the branchial fistula. There was no history of similar deformities in any other members of the family.

NÆVUS.—Dr Yeats showed a case of a large venous nævus on the bridge of the nose in a child, which was treated and cured by injecting at one sitting, into different parts of the tumour, through one external puncture, five drops of carbolic acid and olive oil, equal parts. Care was taken to make firm pressure round the base of the nævus while the fluid was injected. The cicatrix that formed was very insignificant (Manchester Medical Society, 7th June).—*British Medical Journal*, July 29, 1882.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

THE "PAINTED SICKNESS" OF MEXICO.—A curious disease has been recently described for the first time by Dr Iryz of Mexico. It is known as the painted sickness, or *mal de pinto*. It is endemic in Southern Mexico and Central America, where it seems to have existed for a long time. It is a contagious disease of the skin, characterized by abnormal pigmentation, itching, and desquamation, a peculiar odour, and characteristic sensation on touch. The general health is not affected. There are no constitutional symptoms. It has a chronic course, and may run on for many years. It is curable under treatment, however, and sometimes ceases spontaneously. The disease begins with a patch of discoloration upon some part of the skin, accompanied by desquamation and itching. The discoloration spreads, as a rule, from this central starting-point. It is unsymmetrical, and may be either discrete or confluent. Dr Iryz describes four different varieties of the disease, the classification being based chiefly upon the colour of the patches.

These varieties are, black, blue, red, and white. In the first two the process is superficial, involving only the epidermis; in the latter two forms, the derma and rete mucosum are affected. The black and blue varieties often coexist. The surface becomes covered with dark patches, so that in extreme cases the patient looks like a negro, in mosaic. The affected part becomes somewhat raised, and, though at first dry, is eventually moist and gummy. There is no pain, tenderness, or sign of inflammation. The white and red varieties may also coexist. The patient becomes more or less covered with patches of a perfectly white, a rose, or a red tint. This gives him a variegated appearance which is the reverse of beautiful, especially when the face is affected. The diseased skin is hard, condensed, and has apparently lost most of its capillaries. Islets of dark pigment are sometimes found in the light-coloured patches. In some cases the patient's hair as well as skin becomes perfectly white. This whiteness is much more marked than in vitiligo, and cannot be affected by pinching or pressure. The dark patches spread much more rapidly than the light ones. The odour is peculiar and disagreeable, resembling somewhat that from mouldy garments. The disease is treated by attention to hygiene and the administration of large doses of arsenic.—*The New York Medical Record,* 17th June 1882.

LONGITUDINAL ENLARGEMENT OF THE BED OF THE NAIL, WITH SECONDARY ATROPHY OF THE NAIL.—Unna of Hamburg, who has among other studies of skin diseases, devoted himself to the elucidation of the growth and diseases of the nail, records four cases under the above heading. In all of them there was a gradual outgrowth of the bed of the nail, affecting its posterior and central part, combined with thinning of the nail substance proper. The disease advances in some instances so far that the groove at the posterior margin of the nail became entirely obliterated, the horny layer of the skin of the finger running directly and continuously into the nail. The nail substance was thinner than is natural, and permitted the vascularity beneath to be more distinctly visible. On either side of this overgrowth the nail itself was thin and brittle. There seemed to be more than an exaggeration of the lines seen naturally on a healthy nail. It resembled much a keloid-like, smooth, red, new formation, which had insinuated itself from the back of the finger into the sound nail and forced it apart. All the nails were not equally, and some were not at all, affected. In one case there was co-existent psoriasis, but the disease of the nails was quite dissimilar to that met with in association with general psoriasis. In the other instances there was no psoriasis, but there was coldness of the hands and feet ("dead fingers?"), and lividity of the cheeks, nose, and fingers and toes. Obstructive disturbances of the circulation in various organs played an important part in all the cases. Venous stasis has a decided influence in the configuration of the ends of the fingers and on that of the nails. Hoyer has proved a direct communication to exist between the venous and arterial systems in the terminal phalanges of the fingers and toes, and especially just under the nail bed. The engorgement from the venous system is thus undiminished by an intermediate capillary system, but passes unlessened into the arterial. The grades of these "engorgement onychiæ" are characteristic enough. Where the venous stasis implicates the deeper vascular regions of the skin alone—that is in consequence of a dilatation of these vessels—the nail bed, and as a result the nail also, will accommodate its shape to that of the entire finger tip (the nails of phthisis) without exhibiting alterations in their structure. Where, on the contrary, the superficial vascular regions—the papillary body with the ridges of the nail bed and nail matrix—are involved, there will be no clubbing of the whole nail, but, according to the predominating situation on the nail bed or in the groove, either isolated longitudinal enlargements and furrows, with partial secondary breaking up of the nail (perhaps the disease under notice), or primary degeneration and atrophy of the nail (certain examples of so-called "dead fingers"—Frost) arise. The disease does not seem influenced by any indicated treatment, such as tar or arsenic locally. In one of the cases, however, both the pathological appearances in the nails, which had lasted years, and all the abnormal circulatory phenomena, were removed by a residence for fourteen months in Brazil. The patient in this case was a Brazilian by birth, aged 68, who had resided for eighteen years in Hamburg.—*Vierteljahresschrift für Dermatologie und Syphilis*, 1 Heft, 1882.

THE ETIOLOGY OF LUPUS VULGARIS.—Raudnitz has made some careful investigations into this question, the results of which in some particulars are interesting. They were undertaken at the clinique of Professor Pick at Prague, the total number of cases being 209. As regards sex, 37·3 per cent. were males, 62·7 per cent. females. The disease first showed itself in proportionally the largest number, in males between the ages of 5 and 10, reckoning by periods of 5 years, in females between the ages of 10 and 15. The disease begins much earlier on the cheek than on the nose, none having the nose affected before the fifth year, while in eleven it had shown itself on the cheek. Taking all the cases and all ages, however, it appeared first on the nose, the inner canthus, and the lip, in 38·2 per cent.; on the cheeks, in 27·4 per cent.; on the trunk and extremities, in 24·5 per cent. The investigation into the connection of lupus with scrofulosis elicited the following:—When on the neck, cheek, or chin, a glandular swelling suppurated and commonly spontaneously burst externally; the abscess healed with a puckered scar. From one to two years subsequently, rarely after a longer interval, the cicatrix became itchy, and in it or in its immediate neighbourhood the first lupus papule appeared.

Again, the affection commenced in the inner canthus, or in the nose after frequently recurring catarrh of the eye and nose. Lupus, however, appears in the same form in those previously scrofulous, and in persons in sound health. In twelve cases mechanical injury to the part subsequently affected with lupus was clearly demonstrated.—*Vierteljahresschrift für Dermatologie und Syphilis*, 1 Heft, 1882.

PERISCOPE OF OPHTHALMOLOGY.

By George A. Berry, M.B.

On Miliary Tuberculosis of the Brain and its Membranes in Relation to Eye Affections (*Græfe's Archiv*, xvii. 1).—Deutschmann has found the following ante and post-mortem appearances result from injections of tubercular matter into the cranial cavity of young rabbits. Three weeks after inoculation optic neuritis followed by atrophy and sometimes vitreous opacities. Eventually, after a variable lapse of time, development of characteristic choroidal tubercles. On post-mortem examination the neuritis was found to be caused by tubercular deposit in the sheath of the nerve. The deposit was never continuous with those in membranes of brain, but began first at the intraocular end of the nerve and spread backwards.

On the Conditions of Dynamic Equilibrium of the External and Internal Recti Muscles in Different States of Refraction.—Bjeloff (St Petersburg, Thesis), by a comparison of 216 cases,—76 of myopia, 74 of hypermetropia, and 66 of emmetropia,—has established the relative frequency of different positions of equilibrium before and after optical correction, as well as the breadth of abduction and adduction under similar circumstances. This he did both for distant fixation (5 metres) and for the fixation of a near object (30 ctm.) The normal dynamic relation, that is parallelism, when a distant object is fixed, is most frequently met with in uncorrected myopia than in emmetropia, dynamic parallelism being on the whole less frequently met with in hypermetropia corrected or uncorrected, and in corrected myopia. On fixation of a near object the order of frequency of parallelism is,—corrected myopia, emmetropia, hypermetropia corrected or uncorrected, and uncorrected myopia. Thus the correction of myopia has a greater influence on the position of muscular equilibrium than has the correction of hypermetropia, which barely makes an appreciable difference. The order of frequency of latent divergence, or a divergent position of equilibrium, irrespective of the distance of the object of fixation, was found to be, uncorrected myopia, corrected hypermetropia, emmetropia, uncorrected hypermetropia, and corrected myopia. Whilst in point of degree of this divergence the same order was maintained, with the exception of a transposition of the two first, *i.e.*, latent divergence, though less frequent, in corrected hypermetropia than in uncorrected myopia reached a higher degree. Again, the order of frequency of latent conveyance was, uncorrected hypermetropia, corrected myopia, emmetropia, corrected hypermetropia, and uncorrected myopia. Whilst the sequence in degree of the latent convergence was for distant fixation uncorrected hypermetropia, uncorrected myopia, emmetropia, and myopia and hypermetropia corrected; for a near object, on the other hand, greatest in corrected hypermetropia, then in uncorrected myopia, emmetropia, uncorrected hypermetropia, and least in corrected myopia. According to Bjeloff, there is a normal relation between the externi and interni when the breadth of abduction (ab.) stands to that of adduction (ad.), as 1 : 2 *i.e.*, when ab. $= \frac{\text{ab.}+\text{ad.}}{3}$. If ab. $> \frac{\text{ab.}+\text{ad.}}{3}$ there is insufficiency of the interni, whereas, if ab. $< \frac{\text{ab.}+\text{ad.}}{3}$ there is insufficiency of the externi, the amount of insufficiency being given by the formula $\text{I} = \frac{2\,\text{ab.}-\text{ad.}}{3}$. [This is, no doubt, a good enough rule to go by when I turns out to be positive, which would indicate a corresponding or, we should say, even greater degree of insufficiency of the interni, but a negative value of I (as would be given by such a common state of matters as abduction = prism 8°, adduction = prism 24° or more) by no means implies an inconvenient preponderance of the interni.]

THE SIZE OF THE FIELD OF VISION IN RELATION TO ACCOMMODATION.—Emmet (*Archiv. f. Augen.*, xi. 3) has found that the extent of the field of vision is increased in all directions by forcible accommodation. The amount of the increase varies from 1½° to 2½°. He ascribes the increase to the drawing forward of the retina and choroid, and the contraction of the ciliary muscle. [Apart from the difficulty of making perimetric measurements with sufficient accuracy to establish beyond doubt the existence of such a slight alteration in extent of the field, the author has by no means satisfactorily disproved the possibility of a purely physical explanation of the alteration. With an alteration in curvature of the lens, a change in the position of its anterior surface and nodal points, as well as a condition of experiment which necessitates a considerable degree of diffusion, it is hardly likely that the limits of the field from optical causes alone would remain exactly coextensive with those found when the eye is not accommodating.]

ON CORTEX HEMIANOPIA.—Although, from the experiments of Munk, there can be little doubt that the visual centres lie in the occipital lobes, each centre presiding over its corresponding half of either retina, there has only been, so far as we are aware, one sufficiently definite and striking proof of the correctness of Munk's conclusions drawn from pathology; the case published by Curschmann. In this case a man of 50 suddenly entirely lost vision to the left side, eleven days after swallowing by mistake a quantity of sulphuric acid, from the effects of which he died, after sixteen days' starvation, and five days after the occurrence of the hemianopia. The autopsy revealed, as the only cerebral lesion, a large and distinct softening of the *right occipital lobe,* involving the cortex mostly on the medial surface, and stretching to the point of the lobe.

Haab (*Klinische Monatsblätter f. Augenheilkunde,* May 1882) has met with a case which is almost the counterpart of the one described, and the particulars of which he gives along with a scarcely less convincing case of Huguenin's. The first case, a woman aged 61, had been under treatment for endo- and peri- carditis which was followed shortly by a transitory paresis of the left extremities. She was found soon afterwards to have complete left homonomous hemianopia with unimpaired central visual acuity; and this, until her death one year later, remained the only symptom of intracranial mischief. On post-mortem examination a patch of softening was found, several square centimetres in extent, involving the medial surface of the cortex of the right occipital lobe, round about the sulcus hippocampi. Measured from the point of the occipital lobe, the softening stretched forward 6 ctm. The lesion was so superficial that a tolerably thick layer of normal white fibres surrounded the posterior cornu, which was, therefore, not involved. The rest of the brain was in no way abnormal, and more especially no suspicion of lesion was to be found in the optic thalami, corpora quadrigemina, corpora geniculata, or optic tracts. The hemiparesis must have been due to a transitory disturbance in the circulation of the motor centres.

In the second case, a child of 8, of very strumous diathesis, there existed left hemianopia, and besides, and of longer duration, excessive and constant headache, occasional convulsions, and an arrested psychical development, but no trace of motor paresis. The autopsy revealed the presence of two tumours—one at the point of the left frontal lobe, the other at the end of the right occipital lobe. The first tumour was a caseous mass, 2·5 × 1·75 × 1 ctm., and involved the portion of reflection of the second frontal convolution, leaving the first and third convolutions free. The second tumour was of a similar nature, and measured 3 × 3 × 2·5 ctm. It was situated in the sulcus hippocampi. There can be little doubt that this second tumour was the cause of the hemianopia.

PERISCOPE OF SYPHILOLOGY.

By Francis Cadell, F.R.C.S. Ed.

Syphilitic Azoospermism.—In the *St Louis Courier of Medicine,* June 1882, Dr Bryson publishes six cases of this affection. Modern research, he says, both in the way of clinical observation and experiment on the lower animals, has clearly shown that the male may be perfectly competent to hold sexual commune with one of the opposite sex, and be at the same time entirely sterile, such unions being unfruitful for the reason that the testis of the male either does not secrete vivifying sperm-cells, or else that these are not permitted to form a part of the emitted fluid by reason of some mechanical obstruction to their outflow. During his observation of the patients whose cases Dr Bryson describes, specimens of their semen were on several occasions examined, without finding any trace of spermatozoa. There was no history, in any of the cases, of any inflammatory affection or injury of the testis which might account for the sterility, syphilis being the only apparent cause of this abnormal condition. The symptoms are thus described:—The testicles were, perhaps, a little reduced in size, slightly flabby, and less elastic and plump than usually found. The glands are also more sensitive to pressure than normal. In none of the cases had there ever been noticed any enlargement of the testes, nor could any one of the patients remember that any pain had been felt. Where atrophy of the gland is found in syphilitics, it is attributed to previous orchitis, by which term is meant an inflammatory process. There was never at any time evidence of any such action as could fairly be called inflammatory to be made out in the history of these cases. Azoospermism may be due to—1. Congenital bilateral deficiency of the epididymis or vas deferens. 2. Congenital bilateral anorchidism. 3. Cryptorchidism. 4. Diseases of the testes. 5. Obliteration or obstruction of the epididymis or vasa deferentia. 6. To diseased conditions of the semen. Besides the above-named causes there is a physiological azoospermism. It is well known that frequent indulgence in the genital act results in the disappearance of the zoosperms from the emitted fluid in some cases, and that rest brings about their return. Of the above-named causes all may be eliminated except the fourth, or diseases of the testis proper. There was not, so far as the author could make out, any evidence of the existence of syphilitic or other diseases of the nervous system to such an extent as to make it an etiological factor in any of the cases. The author considers the testicular disease in his cases a degeneration, and not the result of inflammation, and that there seems little room to doubt that the real cause of azoospermism is an increased development of the connective tissue substance of the gland, with fibrous degeneration, resulting in pressure on the epithelial or secretory elements to the extent of preventing the development of the sperm cells, but not going so far as to destroy the epithelial structures. The disease should be named interstitial syphilitic degeneration of the testis.

ACUTE SYPHILIS.—A clinical lecture on this subject is published in *The Medical Record*, 8th July 1882, by Dr F. N. Otis. After describing the characteristic developments of this disease in a typical case, the author gives his views on treatment. The treatment of syphilis during the acute stage will be addressed to the removal of the material which is causing the trouble—that is, to the superfluous cell-growth or accumulation, the same material that is found in the initial lesion, and the same that is found embarrassing and enlarging the gland structure, the same as in the papule, the mucous patch, and the scabs which occur in the hair. These lesions are all brought about and kept up by one and a single condition, namely, that resulting from an abnormal local proliferation and accumulation of germinal cells. The necessary process for removing this cell material is simply a fatty amorphosis, through which alone any living material, normal or abnormal, must pass before it can be eliminated from the living organism. The means by which it may be effected are various: 1st, pressure; 2nd, innutrition; 3rd, various external agents and internal remedies, which by experiment have been found efficient in producing or hastening fatty degeneration or metamorphosis of tissue. First, in regard to pressure: the necessary pressure exerted upon any local cell accumulation in the tissues would tend toward its removal by fatty degeneration. Second, in regard to innutrition: withholding of necessary food produces fatty degeneration of the tissues. The starvation cure, the sweating cure, the much-vaunted cure by cathartics, diuretics, etc., can now be recognised as influential through their capacity to hasten fatty metamorphosis. But the remedy of greatest value is *mercury*, and this, as is well known, is an efficient agent in producing fatty metamorphosis of living material. *Small doses of mercury long continued constitute the most effective and judicious mode of treatment of syphilis during its active stage.* Iron is also indicated, because the health is usually more or less below par. For the open lesions, during the acute stage of syphilis, the daily application of a strong solution of nitrate of silver—40 to 60 grains to the ounce of water—is beneficial. When papules are so situated as to cause unsightliness, as on the hands or face, ung. hyd. prœcip. alb., with an equal quantity of cosmoline, is of advantage. With regard to giving up the use of tobacco during the acute stage of syphilis, the author quotes a note he received from Professor Willard Parker, in which he says, "Some people believe that syphilis is incurable; that is not my belief. When a patient comes to me with syphilis, I say to him, Do you use tobacco or alcoholic spirits? If he says yes, I say to him, You are possessed of three devils, syphilis, rum, and tobacco; if you will exorcise two of them, R. and T., I will take care of and cure the other; but if you will not agree with me to give assistance in this way, I will not undertake your case." Dr Otis assures his hearers that this advice fully coincides with his own opinion, particularly in regard to the "rum," and in regard to the "tobacco" also when the mucous membrane of the mouth and throat is affected or predisposed to trouble.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

INCISION OF THE TRIGONE.—The conditions for this operation, which has been twice performed with success in the cases of children, are that the calculus can be felt through the rectum, and that at least during anæsthesia it can be thus grasped and drawn backwards. The patient, having his clothes removed and being slightly narcotized, stands in front of an attendant, resting his head and shoulders in the latter's lap. The operator then introduces his forefinger into the rectum, pushes the peritoneal fold upwards (apparently easily felt?), finds and grasps the stone, and draws the latter backwards towards the gut. A vertical incision upon the stone is now made as far as the edge of the prostate, and the calculus is pressed through the wound. On the bladder resuming its normal position the incision is found to be very small. The attendant hæmorrhage is slight, and the fistulæ healed in from 17 to 35 days. This method has the advantage of leaving the sphincters, the prostate, and the urethra intact, and seems to resemble the old method of Celsus. It has not yet been tried in the case of adults, and experience only can decide whether the fistulæ always heal as well as in the cases cited (Mühlhäuser, *Archiv für Klin. Chirurg.*)—Sonnenburg, *in Centralblatt für Chirurgie.*

AN ATTEMPT AT THE OPERATIVE TREATMENT OF OZÆNA FŒTIDA SIMPLEX.—During the past year I have attempted, in two cases of ozæna fœtida simplex affecting young girls, to procure a better ventilation of the nasal cavity by removing the whole of the inferior and the greater part of the middle turbinate bones; and in both instances a distinct success was the result of the treatment. The penetrating fœtor, the symptom which, above all, induced the patients to seek surgical aid, disappeared under the use of disinfectant and astringent injections, although these had been used previously to the operation for months and years without any effect. The patients afforded examples of what I have often observed in cases of ozæna fœtida simplex, viz., the nose congenitally narrow, accessible only to the smallest instruments, the passage of which was the signal for hæmorrhage; the vomer bent, and the turbinate bones or one or other side almost completely obstructing the passage. In the one case there was considerable injection and velvety swelling of the mucous membrane, with much discharge. In the other there was present the cicatricial shrivelling with formation of horny crusts, to which so much attention has been lately directed. I am far from asserting, or even daring to hope, that in this extirpation of the turbinate bones we have found a sovereign remedy for ozæna. As to the best method of performing the operation I cannot yet speak with certainty. At the present time I would recommend the following plan:—A strongly concave gouge of the largest available size is introduced into the nostril and pressed firmly backwards twice or thrice in the direction of the middle meatus, *i.e.*, pretty nearly parallel with the horizontal plate of the hard palate. As the gouge is pressed backwards, its cutting edge should be made to act first inwards and then downwards. The semi-detached fragments of bone must now be removed with polypus forceps or other suitable instruments. If bleeding be severe the meatus may be plugged. As ozœna fœtida simplex is no very common affection, I think it advisable to record the results obtained in the treatment of the two cases above mentioned.—R. Volkmann, in *Centralblatt für Chirurgie.*

REPORT OF THE SURGICAL CLINIC AT KIEL FOR THE YEAR 1880 (Esmarch).—The report, which is remarkable for its brevity and clearness, gives first a table of "accidental wound diseases." Thus, among 779 patients treated in the wards of the hospital, *erysipelas* occurred six times (all recovered), *pyæmia* once, *septicæmia* seven times, and *tetanus* once. There were three cases of tetanus among the out-patients. Almost all these cases were under other than antiseptic treatment. Under the latter there was but one case each of septicæmia and tetanus. Almost all the cases of tumour-extirpation healed under a single dressing in from 10 to 14 days. Of 9 cases of ovarian tumour, 6 (1 unilocular, 5 multilocular) were cured by ovariotomy. Death from collapse soon after the operation occurred in one case, and in another, where both cystic (multilocular) ovaries were removed, death took place on the fourth day from peritonitis. In another case of ovariotomy (dermoid cyst), where the tumour was adherent on all sides, although perforation of the intestine, with formation of a fœcal abscess, occurred, still the case was completely cured at the end of 2½ months. In one case of uterine fibroid hysterotomy was performed, and a cystic ovary removed at the same time. Death from collapse took place 36 hours later. The uterus (cancerous) was twice extirpated from the vagina. One case died, the other recovered. Nephrectomy was undertaken once for renal carcinoma. Death took place on the eighth day, from perforation of the large intestine, which was also cancerously infiltrated. Electrolysis was tried in a case of spindle-celled sarcoma springing from the basis cranii, but without effect. The sciatic nerve was stretched in two cases of sciatica. One patient was cured. In the other, though the pains were alleviated, paresis of the limb was left. The brachial plexus was stretched once for neuralgia in the area of the median nerve and tabes dorsalis. Both affections were relieved, but the neuralgia recurred later, and was cured by stretching the nerve itself. In a case of neuralgia testis, castration, excision of the cicatrix, and stretching the spermatic nerve were all tried in turn without success. The administration of arsenic at length effected a cure. Gastrostomy for stricture of œsophagus, the result of a scald, in a boy 3 years of age, was successfully performed. The patient is now fed through the fistula. The repair of a defect at the root of the nose by lining the skin-flap (taken from the forehead) with a framework of half-decalcified bone is also interesting. A case of congenital luxation of the head of the femur may also be mentioned. It was cured after several months' treatment by extension and plaster of Paris apparatus.—A. Henry in *Centralblatt für Chirurgie.*

THE IODOFORM TREATMENT OF WOUNDS.—In the Augusta Hospital at Berlin, for some time past, a 10 per cent. solution of iodoform in collodium has been used for the purpose of closing antiseptically small recent wounds which neither required nor admitted of the application of a compress-dressing. The wound is first cleaned and disinfected, any bleeding stopped, and the necessary sutures applied, and then the surface is painted with the iodoform solution till a strong and perfectly protective covering is formed. This treatment we employ in the case of wounds healing by first intention, as well as in recently sutured large wounds to which, either on account of their position or as the result of operation, a compressing antiseptic bandage cannot be applied, *e.g.*, after excision of the sub-maxilla, or of small tumours, atheromatous cysts, or lipomata in the region of the anus, female genitals, or eye. The stitches remain in for eight or ten days, at the end of which period primary union is found to be complete. I have also had good success with this solution in the treatment of tracheotomy wounds during diphtheria. Instead of using the pad of carbolized oil lint which was formerly placed over such wounds, we now paint the raw surfaces (after hæmorrhage has been arrested) with the iodoform-collodium. The application is repeated daily after the old crust has been first removed. The wound thus treated is merely covered with a small dry pad to keep off the pressure of the canula. This treatment has been employed in 25 cases altogether (22 diphtheritic) without the wound in any one case becoming phlegmonous, whilst under the old employment one out of every five cases would become so involved. In conclusion, I may add a few remarks on iodoform treatment in general. Since Professor Küster commenced the general employment of iodoform in the Augusta Hospital three months ago, the results obtained have been very different from the successes so copiously announced from all sides. Not only have we observed toxhæmic symptoms even after its employment in minute doses; not only have several cases of cerebral complication with typhous symptoms occurred; but erysipelas and phlegmonous inflammation have appeared in rapid sequence—accidents which, under Lister's treatment, have been of the greatest rarity with us. Thus, among certain mammary amputations, where iodoform was applied under a typical Lister's dressing, three cases of erysipelas occurred, and one of these ended fatally. Suppuration also followed its use in cases of herniotomy and amputation of the upper arm, etc. Thus iodoform seems to afford but a slight protection against erysipelas, and even when applied in the finest powder to sutured wounds, which should heal by first intention, it seems to act as a foreign body and to lead to retention of secretion or aseptic suppuration. At all events, these accidents have induced us to return to the Listerian treatment, under which, during the past year, we obtained such speedy and satisfactory results. Perhaps these remarks may call forth a clearer definition of the cases in which we should choose iodoform, and of those in which we should rely upon the earlier forms of treatment.—Dr Theodor Görges in *Cent. f. Chirg.*

A UNIQUE CASE OF FOREIGN BODIES IN THE GASTRO-INTESTINAL CANAL—EVACUATION PER ANUM.—To collect the reported cases of foreign bodies which have traversed the gastro-intestinal canal, and have been evacuated per anum, would require the ransacking of the files of nearly every medical journal for the last third of a century, since no bibliography of this subject has, to my knowledge, yet appeared. A perusal of those journals which are accessible convinced the writer that the case about to be reported is an *unicum*. The history, briefly, is as follows:—Mrs. J. G., suffering from melancholia, with intercurrent attacks of mania, was, at the request of her parents, removed from the asylum to her home in this city. Symptoms which had manifested themselves during the last days of her stay in the asylum now appeared in a graver form. Green-paint vomit, constipation, small, rapid pulse—120 per minute—a temperature of 102½° F., a pale, anxious countenance, were the general symptoms. Locally: Generalized abdominal pain, with special sensitiveness in the right iliac region; meteorism moderate; tongue thickly coated. The patient was very reticent, only saying and reiterating that she was "rotten inside," and could not possibly live. The diagnosis of peritonitis, localized in the right iliac region, appeared the proper one. After three days the constipation gave place to a mild form of diarrhœa, and all the urgent symptoms disappeared. Temperature and pulse fell, not to the normal, however. Vomiting was the only persistent symptom, but not as severe as at the outset; it invariably occurred after partaking of solid food; the patient was therefore supplied only with liquid or semi-solid nourishment. This lull, after lasting for five days, was interrupted by a second attack of peritonitis (?), presenting the same symptoms and lasting the same length of time as the first one above recorded, to be in turn followed by slight diarrhœa and relief from the distressing symptoms. For five weeks this alternate train of symptoms was observed by the writer; partial intestinal obstruction occurring four times. The treatment consisted in rest—though this was at times difficult, owing to the unmanageableness of the patient—the administration of opiates, etc. Somewhat after five weeks the mother of the patient came to the writer's office, and said that, in obedience to instructions, she had regularly examined the evacuations, and that she had that morning found in the vessel a long, hard, spindle-shaped mass of fæces, encased in glairy mucus. Examination revealed the edges of several spoons protruding from the mass. Softening and breaking it up, she found it to contain three teaspoons, which she immediately brought to the writer's office. They certainly bore every evidence of their prolonged sojourn in the tortuous canal of the intestine. On cleansing them with water it was seen that the three spoons must have traversed the canal lying in apposition with each other—the convexities of the one fitting into the concavities of the other, for the reason that the portions exposed to the action of the intestinal fluids and gases were blackened by them, while the protected parts retained the grayish-white color of britannia metal. After the evacuation of the *materies peccans*, all symptoms of abdominal trouble disappeared, and none have since then returned. Measurements of spoons: Length, 5¾ inches; breadth of bowl, 1½ inches. The patient now declares that she swallowed the three spoons in one day, with the intention of thus ending her existence. Had one of them become wedged crosswise in any portion of the intestine, as has occurred in one of the reported cases, her plan would have been crowned with success. —Samuel Kohn, in the *New York Medical Record.*

Part Fifth.

MEDICAL NEWS.

Royal Colleges of Physicians and Surgeons, Edinburgh.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held on the 27th of July 1882 and subsequent days, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Robert Buck Carruthers, Manchester; John M'Bride, Ontario, Canada; Andrew Thos. Todd, Edinburgh; James Addington Caldwell, Edinburgh; John Jackson Berry, Pendlebury, Manchester; Fredk. William Blackwell, London; John Thomas Finlay, Liverpool; Harry Scott, Crumpsall, Manchester; Francis M'Donald Swallow, Reigate; Robert Main, Newcastle-on-Tyne; George Sinclair, St Margaret's Hope, Orkney; James Patrick Andrew Wilson, Edinburgh; Henry Thos. Legat, South Hylton, near Sunderland; Louis Joseph Petricher, Port Louis, Mauritius; Francis Joseph Salter, Leeds; Eustace Julian D'Gruythee, Paddington, London; John Emanuel Panioty, London; Joseph Graham, Cookstown, Co. Tyrone, Ireland; William James Hadden, Edinburgh; David M'Mahon Browne, Dublin; Arthur Charles Kemble, London; Henry Arthur Lownds, Egham, Surrey; John Anderson, Rosewell; Joseph Holmes, Leeds; Robert R.

Wallace, M.B., Hamilton, Ontario, Canada; George Neale, Fontigary, near Cowbridge, Glamorgan; John Henry Ebell, Edinburgh; Winton Dickson, Dewsbury; Edward George Horder, Edinburgh; William Flood, Oakhill, Arva, Cavan; Patrick O'Donnell Maloney, Co. Limerick, Ireland; Mark Anthony Robinson, South Kensington, London; George Frederick Chadwick, Dewsbury; Alexander M'Rae Bremner, Edinburgh; William Stephen Nockolds, F.C.S., L.S.A., Shepherd's Bush, London, W.; James Watson, Holywood, Down, Ireland; George Henry Taylor, Houghton-le-Spring; Thomas Patterson Devlin, Belfast, Ireland; John M. Phillips, Dublin; Stephen Frederick Rowan, Blackburn; Cassius W. Belton, Edinburgh; James Menzies, Aberfeldy.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine since 7th July 1882, and were admitted L.R.C.P. Ed.:—James Woodward Riley, Salop; Alex. Llewellyn Williams, Wainfleet, Lincolnshire; John Thos. Davies, Rhyl; William John Stephens, Old Charlton; John Henry Robinson, Leamington; Cecil Alex. Lane, Edinburgh; Alfred Wm. Harris Lee, Sheffield; Robert Ambrose Weston, Burnley, Lancashire; Angus M'Kenzie Cattanach, Glengarry, Canada; James John Pratt, Liverpool; Charles Frederick Jewesbury, Gloucester; Geo. Herbert Salter, London; Jas. Edwin Anderton, Blackheath, London; Harold Allan Wild Batten, Craven Park, London; James Sidney Hunt, Douglas, Isle of Man; Ebenezer Stanley Smith, Bayswater, London; Frederick Albert Heslop, Southport; John Lowe, Lichfield; Walter Octavius Trotter, Stockton-on-Tees; Joseph Gabbett Maunsell Griffin Stack, Dublin; York Thos. Gray Moore, So. Hackney; Charles Newton Cornish, Taunton; Herbert Ernest Williams, Barrow-in-Furness; Edward Ingham Cowen, St Thomas's Hospital, London; John Edwin Cooney, London; Wm. John Pook, London; Wm. Price Biden, Peckham, London; Francis Nalder French, Manchester; Frederick Wilson, Manchester; Wm. Reith Scroggie, Edinburgh; Daniel De Vere Hunt, Bolton.

Robert Barnes, M.D., F.R.C.P., has been elected one of the Honorary Consulting Physicians to the Chelsea Hospital for Women, which will be removed to the new building in the Fulham Road in the early part of next year.

New Parasites.—We have before us a clipping from the editorial columns of a daily paper in which the recent investigations of Koch are humorously referred to. The editor then goes on to state that, "While Germany has thus given to the world a discovery of presumably vast importance, Wisconsin has not been idle. Dr Buhl, a distinguished physician of that State, has just made a discovery as to the origin and proper treatment of broken legs, which is, on the whole, rather more valuable than the discovery of

Prof. Koch. It has long been noticed that broken legs prevail in thickly settled parts of the country much more generally than in thinly settled regions. It is also undeniable that wherever railroads penetrate broken legs soon become common. These facts are sufficient to enable us to assume that there is something in thickly settled regions that is favourable to the development of broken legs, and that this something—whatever it may be—is carried far and wide by railway trains. Dr Buhl, who is an ardent believer in the germ theory of nearly all diseases, claims that he has discovered a vegetable parasite which infests the human trousers and causes broken legs. Within the past year he has examined with the microscope thirty-six cases of broken leg, and in every case has found this parasite in the accompanying trousers. In the course of the last six months he has placed garments cut after the manner of trousers and inoculated with the parasite in question upon the fore legs of eighteen cats, thirteen of whom were afterwards found in a steel trap, set for the purpose in the doctor's back-yard, each with a fore-leg broken. He also tried a similar experiment upon seven cows belonging to his wife, six of whom were afterward run over by railway trains—the White River and Sheboygan Railroad running directly through the cow pasture—and sustained compound fractures of more or less of their legs. Having thus fully established the fact that broken leg is produced by a parasite infesting the trousers, Dr Buhl maintains with much plausibility, that by inoculating human trousers with this parasite after it has been artificially bred in trousers supplied for the purpose to cattle, men will be fully protected against broken legs. So far as the non-scientific mind can perceive, the Doctor's plan is an admirable one. If we can by so simple a measure as the inoculation of trousers put an end to the wide-spread havoc yearly wrought by broken legs, humanity will owe to Dr Buhl a debt which it can never repay, and the name of Buhl will be inscribed on all sorts of monuments by the side of the equally revered names of Koch and Jenner."—*Medical News*, July 1, 1882.

THE CURIOUS HISTORY OF AN ANATOMICAL SPECIMEN.—We venture to think that few of our readers know the romantic history of one of the specimens in the remarkable collection of preparations illustrating the anatomy of the ear in the possession of the College of Physicians of Philadelphia. Professor Joseph Hyrtl, who prepared the specimens (and from whom they were bought), had such relations with scientific men and dealers that he was able to procure many unusual specimens, sometimes by purchase as great rarities not to be "ordered" as wanted; sometimes by exchange; sometimes as presents. The history of some of these is found in a little pamphlet he published in 1873. As an example of the first, the skull of the gorilla cost one thousand francs, besides the labour afterwards bestowed on the preparation of the ear-bones and labyrinth. As examples of the last are the specimens from the elephant, rhinoceros, hippopotamus, and others presented to him by De Blainville. That from the hippopotamus has, however, a very peculiar and amusing history connected with it. No living hippopotamus had been brought to Europe since the time of the Romans, and the anatomy of its viscera was entirely unknown, when the French government sent M. Arnould d'Abbadie as Minister to the King of Schoa (Abyssinia). The Academy, before he left, expressed an earnest wish that he would send them the viscera of a young hippopotamus in Gannal's solution. The minister obtained the coveted prize with unexpected and most creditable tact. On his arrival he found his sable Majesty laid up with articular rheumatism, and was soon besought to lend his services, as in the Orient all the Franks pass for physicians. M. d'Abbadie answered resolutely, "Assuredly." "Bring me the remedy," said the King; "I would give my crown to be well again." "Nothing is easier; the remedy is to be found in your own country; it is hippopotamus fat." "Fetch a hippopotamus," cried the King in haste to his attendants. "Not so fast, your Majesty, not so fast; it must be the fat of a female, and of a female that is pregnant," said the wily ambassador. Diplomacy clearly has its place even in science. Huntsmen were immediately sent out in all directions, and soon returned in triumph. D'Abbadie rubbed the fat on the joints of the King and cured him! History saith not anything as to his fee, but she does record the fact that the fœtus was sent to the *Jardin des Plantes.* There De Blainville allowed Hyrtl to remove one of the temporal bones, and so the College of Physicians has the labyrinth of the hippopotamus of Schoa.—*Philadelphia Medical News.*

PUBLICATIONS RECEIVED.

Archives Italiennes de Biologie. Herman Loescher, Turin, 1882.

Army Medical Department Report, 1880. Vol. XXII.

Atlas of Illustrations of Pathology. Fasc. IV. New Sydenham Society, Lond., 1882.

Sir Joseph Fayrer, K.C.S.I., LL.D., M.D., F.R.S.,—Climate and Fevers of India. J. & A. Churchill, Lond., 1882.

James Greenwood and L. S. Forbes-Winslow, M.R.C.P., D.C.L.,—Handbook of the Laws relating to Medical Men. Baillière, Tindall, & Cox, Lond., 1882.

D. Berry Hart, M.D., etc., and A. H. Barbour, M.A., etc.,—Manual of Gynecology. Maclachlan & Stewart, Edin., 1882.

D. M'Alpine, F.C.S., etc.,—The Botanical Atlas. Part IV. W. & A. K. Johnston, Edin., 1882.

Henry MacCormac, M.D.,—Etiology of Tubercle. Henry Renshaw, Lond., 1882.

J. Mayne, M.D.,—Therapeutical Remembrancer. J. & A. Churchill, London, 1882.

Dr Albrecht Nagel,—Mittheilungen aus der Ophthalm. Klinik in Tubingen. H. Laupp'schen, Tubingen, 1882.

John W. Ogle, M.A., etc.,—The Harveian Oration, 1880.

Dr L. Pfeiffer, and C. Ruland,—Pestilentia in Nummis. H. Laupp'schen, Tubingen, 1882.

James Startin,—Hereditary Syphilitic Eruptions of the Skin in Early Life. Henry Renshaw, Lond., 1882.

Transactions of the Massachusetts Medico-Legal Society. Vol. I., No. 4.

Transactions of the Perthshire Medical Association, 1882.

J. Burney Yeo, M.D.,—Health Resorts and their Uses. Chapman & Hall, London, 1882.

PERIODICALS RECEIVED.

Alienist and Neurologist,—Jan.-July.
American Journal of the Medical Sciences, —Jan.-July.
American Journal of Neurology and Psychiatry,—Feb.-May.
American Journal of Obstetrics,—Jan.-Aug.
American Medical Digest,—Feb.
American Practitioner,—Jan.-Aug.
Analyst,—Feb.-Aug.
Annales d'Oculistique,—Jan.-June.
Annals of Anatomy and Surgery,—Aug.
Archives de Tocologie,—Jan.-Aug.
Archives Générales de Médecine,—Feb.-Aug.
Archives of Dermatology,—Jan.-April.
Archives of Laryngology,—Jan.-April.
Archives of Medicine,—Feb.-Aug.
Atlantic Medical Register,—Feb.
Australasian Medical Gazette,—Dec.-May.
Australian Medical Journal,—Oct.-June.
Berliner Klin. Wochenschrift,—Jan. 23-Aug. 21.
Birmingham Medical Review,—Feb.-Aug.
Births, Deaths, and Marriages, Monthly Return of,—Jan.-July. Quarterly Return,—March-June.
Boston Medical and Surgical Journal,—Jan. 12-Aug. 10.
Brain,—Jan.-July.
British Medical Journal,—Feb. 4-July 29.
Bulletins et Mémoires de la Société de Thérapeutique,—Jan. 30.
Bulletin Général de Thérapeutique,—Jan. 30-Aug. 15.
Centralblatt für Chirurgie.—Jan. 28-Aug. 19.
Centralblatt für Gynäkologie, Jan. 28-Aug. 19.
Chicago Journal,—Jan.-July.
Detroit Lancet,—Jan.-July.
Dublin Journal of Medical Science,—Feb.-Aug.
Ephemeris of Materia Medica, etc.,—Jan.
France Médicale,—Jan. 21-Aug. 24.
Gazzetta Degli Ospitali,—Jan. 22-Aug. 23.
Gazzetta Medica di Torino,—Jan. 15-Aug. 5.
Gazette des Hôpitaux,—Jan. 21-Aug. 22.
Gazette Médicale de Paris,—Jan. 28-Aug. 19.
Gazette Médicale de Strasbourg,—Feb. 1.
Glasgow Medical Journal,—Feb.-Aug.
Indian Medical Gazette,—Jan.-July.
Journal de Médecine de Bourdeaux,—May 7-Aug. 20.
Journal de Saxon,—April-Aug.
Journal de Thérapeutique, — Jan. 25-Aug. 10.
Journal of Anatomy and Physiology,—April-July.
Journal of Nervous and Mental Disease,—Jan.-April.
Journal of Medicine, Feb.
Journal of Mental Science.—April-July.
Journal of Psychological Medicine and Mental Pathology, Vol. viii. Part 1.
Journal of the British Dental Association,—Feb.-Aug.
Kings, Proceedings of Medical Society of the County of,—Feb.-July.
Klinische Monatsbläter für Augenheilkunde, Jan.-Aug.
Liverpool Medico-Chirurgical Journal,—July.
London Medical Record,—Feb.-Aug.
Louisville Medical Herald,—Jan.-April.
Martin's Chemists' and Druggists' Bulletin, —Jan.
Maryland Medical Journal,—June-Aug.
Medical Brief,—Jan.
Medical Press and Circular,—Jan. 25-Aug. 23.
Medical Times and Gazette,—Jan. 28-Aug. 19.
Medical Tribune,—Jan.-July.
Midland Medical Miscellany,—Feb.-Aug.
Minnesota Medical Mirror,—Jan.
New England Medical Monthly,—Jan. 15.
New Remedies,—Feb.-Aug.
New York Illustrated Quarterly of Medicine and Surgery,—July.
New York Medical Journal,—Feb.-Aug.
New York Medical Record,—Jan. 14-Aug. 12.
Nordiskt Medicinskt Arkiv,—Band xiv., Nos. 1-14.
Ophthalmic Review,—Feb.-Aug.
Philadelphia Medical and Surgical Reporter,—Jan.-Aug. 12.
Philadelphia Medical Bulletin,—Jan.-April.
Philadelphia Medical News,—Jan. 14-Aug. 5.
Philadelphia Medical Register,—April-June.
Philadelphia Medical Times,—Jan. 1-July 29.
Physician and Surgeon,—Jan.-July.
Practitioner,—Feb.-Aug.
Progrès Médical,—Jan. 28-Aug. 19.
Recueil d'Ophthalmologie,—Jan.-July.
Revue de Chirurgie,—Feb.-Aug.
Revue de Thérapeutique Médico-Chirurgicale,—Feb.-Aug. 15.
Revue Mensuelle de Laryngologie, etc.,—Feb.-Aug.
San Francisco Western Lancet,—March-June.
Sanitary Record,—Feb.-Aug.
St Louis Courier of Medicine,—Jan.-Aug.
Therapeutic Gazette,—Jan.-July.
Virchow's Archiv,—Jan.-July.
Washington National Board of Health Bulletin,—Jan. 7-July 1.
Weekblad van het Nederlandsch Tijdschrift voor Geneeskunde,—Jan. 28-Aug. 5.
Western Medical Reporter,—Jan.-July.

Part First.

ORIGINAL COMMUNICATIONS.

Article I.—*Arguments in favour of the Theory of Dilatation of the Heart as the Cause of Cardiac Hœmic Murmurs, and of the Appendix of the Left Auricle being the Primary Seat of this Murmur.* By George W. Balfour, M.D., F.R.C.P.

(*Read before the Medico-Chirurgical Society of Edinburgh 5th July* 1882, *and also before the Medical Section of the British Medical Association, Worcester,* 10*th August* 1882.)

The valvular lesions which but a few years ago were almost the only recognised lesions of the heart, which seemed so difficult to diagnose, and to threaten life so seriously and mysteriously, are nowadays readily discovered, differentiated, and their influence as mechanical hindrances discounted. All the interest and the mystery is now transferred to the state of the cardiac muscle and its nervous relations. And of all the problems we are thus brought to face, none is so simple, and few more important, than the actual condition of the chlorotic heart, which has so long been misunderstood.

I have been led to adopt the theory of dilatation of the heart as the cause of cardiac hæmic or chlorotic murmurs, because it seems to be the only one capable of reconciling the various discrepant hypotheses regarding the origin of these murmurs.

This theory is fraught with most important instruction on the one hand, and with a no less momentous warning on the other; because, if it be true, there is no longer any real distinction between functional and organic murmurs, and a murmur can only be regarded as having been functional when it is found to have been curable. Moreover, if functional—chlorotic—murmurs are really due to dilatation, as these murmurs are known to disappear —to become cured—in by far the larger number of cases, we thus obtain the important generalization that dilatation of the heart is a curable disease. The curability of such affections becomes merely a question of degree: they are more or less curable according to the length of time they have persisted, and the extent to which the dilatation has progressed.[1] This is the lesson with which this theory is fraught, and it involves the warning; because if so-called functional murmurs are due to dilatation, and dilatation becomes incurable by persistence and extension, it is surely a most important matter that we should all take care that none of our cases of functional disease become organic by neglect.[2] I have adopted the theory of cardiac dilatation as the cause of cardiac hæmic murmurs for three reasons: first, because it alone seems capable of explaining rationally all the discrepancies in the prevalent theories of these murmurs; second, because it is thoroughly consistent with the results obtained by experiment; and third, because it is perfectly consonant with clinical experience.

I. *The theory of cardiac dilatation explains in a rational manner all the discrepancies in the prevalent theories as to the causation of cardiac hæmic murmurs.* The aortic orifice is the classic position of the hæmic murmur, as described by Hope,[3] Bellingham,[4] Potain,[5] and others, and of late reverted to by Marey.[6] But this hypothesis is totally at variance with the now well-known fact that the hæmic murmur, at its first appearance, though it is a basic murmur, is not propagated along the aorta or into the carotids, and has its position of maximum intensity in the neighbourhood of the pulmonary artery. On the other hand, Marchall Hughes's[7] idea, that the pulmonary artery is itself the seat of the murmur, is untenable, because there is no possible cause of murmur in the pulmonary artery in such cases which is not equally operative at the aortic orifice, or, indeed, more so; while the universally recognised basic position of the primary hæmic murmur completely excludes Parrot's[8] theory, that it originates at the tricuspid orifice. Stokes[9] is the only British authority who recognises the possibility of the hæmic murmur being occasionally mitral in position; but Walshe[1] discards this as being utterly inconceivable. Thus we have each of the four orifices of the heart described in turn by most competent authority as the point of origin of the hæmic murmur, and each of them discarded as incompetent because inconsistent with actual facts in individual cases. Considering the unanimity which prevails amongst all cardiac authorities in regard to organic murmurs, there can be but one possible explanation of this extraordinary discrepancy as to the hæmic murmur, and that is, that it is a murmur which may be audible in all the various positions described. It is impossible to accept any explanation that does not keep this in view and provide for it; and it is equally impossible to accept any explanation inconsistent with the ordinary laws of sound. It may seem absurd to make the latter stipulation; yet the laws of sound are so incompatible with the theories propounded in regard to the hæmic murmur, that this very contrariety is in itself no trifling argument against the so-called functional character of the murmur. Thus Hayden,[2] who is the most explicit of all writers as to the propagation of the hæmic murmur, describes this sound as produced within the blood by friction of the blood-corpuscles against one another, by friction at the arterial outlets, and by the vibration thus produced in the walls of the heart and arteries. Yet he states that this murmur is best heard at midsternum, and "within a diffusion area of three to four inches;" that though it may be heard here and there over the arteries, it is never propagated continuously along them, and that it is never heard at the apex. Nevertheless he acknowledges that an organic murmur, produced, as he supposes, by friction at the mouth of the aorta, is propagated along the arteries, and may be heard at the apex. According to Hayden, then, a functional murmur differs from an organic one in that it is not propagated according to the ordinary laws of sound. It is never propagated along the medium in which it is produced, but, having selected a point of exit, it passes readily and directly outwards through the overlying heterogeneous media, within which it slightly radiates or diffuses itself in some inexplicable fashion. Unfortunately the immutable laws of physics forbid the acceptance of any such delusive theory. That it has been propounded by so intelligent and so generally trustworthy an observer as Hayden is only a further proof that the hæmic murmur is a varying murmur, and that for want of a proper clue he got bamboozled in attempting to follow and explain its different modifications.

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[1] How glad an "Eureka" this is to Senac's doleful wail: "A mésure qu'on pénètre dans les maladies du cœur, la medicine parait plus stérile; que peut'on esperer des medicaments, par exemple, dans les dilatations du cœur."—*Traité de la Structure du Cœur, de son Action, et de ses Maladies*, Paris, 1749, vol. ii. livre iv. chap. 4, page 328.

[2] Not only may neglect cause permanence of the dilatation, but there is some reason to suppose that, in some cases at least, persistent regurgitation leads to inflammatory thickening of the valves, and so to stenosis of the mitral opening.

[3] *A Treatise on Diseases of the Heart, etc.*, London, 1839, p. 106 and p. 389.

[4] *Diseases of the Heart*, Dublin, 1853.

[5] *Dictionnaire Encyclop. des Sciences Médicales*, tom. iv. p. 392.

[6] *Physiologie Médicale de la Circulation du Sang*, Paris, 1863, p. 479.

[7] *Guy's Hospital Reports*, second series, vol. vii., 1851, p. 161. Skoda, Meyer, Bamberger, and Gerhardt all at one time regarded the pulmonary artery as the source of the murmur, *vide* Naunyn's paper in the *Berliner Klinische Wochenschrift* for April 27, 1868, p. 189. Von Dursh also adopted a similar view, *vide Lehrbuch der Herzkrankheiten*, Leipzig, 1868, p. 205.

[8] *Archives Gén. de Médecine*, sixième série, tome viii., 1866, vol. ii. p. 158.

[9] *Diseases of the Heart and Aorta*, Dublin, 1854, p. 533.

II. *The theory of cardiac dilatation, as the cause of the hæmic murmur, is thoroughly consistent with the results obtained by experimental investigation.* When the late Dr Marshall Hall was engaged in investigating the effects of loss of blood upon the system, he observed that during the reaction subsequent to such loss the action of the heart was "accompanied by a peculiar noise resembling that of the saw or of the file, termed by the French 'bruissement,' and very discernible on applying the ear to the chest."[1] This "bruissement" Marshall Hall distinctly recognised as identical with the chlorotic murmur, and he accepted its artificial production by loss of blood as a clear proof of the purely hæmic character of that murmur.[2] Hope, who assisted Marshall Hall in making these experiments, adopts most explicitly the views of that author, and describes the murmur as due to the attenuation of the blood and the increased velocity with which it was circulated.[3] We need not now inquire whether attenuation of the blood or increased velocity of the circulation can ever be, of themselves, a source of murmur, because we have learned since that time that these phenomena, occurring in animals repeatedly bled, are always accompanied by a condition of heart which Hope himself was the first to recognise as an efficient cause of murmur. For Beau, investigating the causation of the murmurs following bloodletting, which he also acknowledged to be chlorotic in character, found that they did not accompany the anæmia primarily produced, but were developed along with the secondary spanæmia, to which he gave the name of serous polyæmia.[4] Beau also found that this serous polyæmia is invariably associated with a dilated and hypertrophied condition of the heart; and that in dogs and rabbits killed by a gradually exhausting hæmorrhage the cavities of the heart are not only manifestly dilated, but the heart itself, freed from clots, weighs from one-fifth to one-third more than the heart of a similar animal destroyed by one suddenly fatal gush from a severed carotid.[5] But as a dilated heart is nowadays universally recognised as an efficient cause of murmur,[6] it only remains to show—

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[1] *Diseases of the Heart, etc.*, London, 1873, p. 86.

[2] *The Diseases of the Heart and Aorta*, Dublin, 1875, p. 248 and p. 252.

III. *From the results of clinical experience*, that the attenuated blood of chlorosis, which so closely resembles that resulting from repeated hæmorrhages, is accompanied by a similar condition of heart; and that the cardiac hæmic murmur appears and disappears in a manner consistent with this theory. Wunderlich[7] and

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[1] *Medico-Chirurgical Transactions*, London, 1832, vol. xvii. p. 257.

[2] *Principles of the Theory and Practice of Medicine*, London, 1837, p. 370.

[3] *Op. cit.*, p. 100.

[4] *Archives Générales de Médecine*, 4ième série, tome ix., 1845, pp. 145, 149, 151, 169, etc.

[5] *Op. cit.*, p. 156.

[6] Hope was the first to point this out, *vide op. cit.*, pp. 77 and 308. *Vide* also Dr M'Dowel, in the *Dublin Quarterly Journal*, vol. xiv., 1852, p. 352; vol. xvi., 1853, p. 76; and vol. xvii., 1854, p. 90. In the *Edinburgh Medical Journal*, July 1856, p. 55, Dr Gairdner has published a paper on this subject, going pretty fully into its literature; *vide* also his *Clinical Medicine*, Edinburgh, 1862, pp. 592, 597, and 600, note. *Vide* also a paper by Dr Bristowe in the *British and Foreign Medico-Chirurgical Review* for July 1861, p. 215.

[7] *Handbuch der Pathologie*, Stuttgart, 1856, Bd. iii. S. 647; Bd. iv. S. 534.

Friedreich[1] have described the chlorotic heart as dilated; while Beau,[2] Bamberger,[3] and Stark[4] have adopted the more rational view that it is hypertrophied as well as dilated; and so well established does this view seem now to be, that Dr Heitler of Vienna, one of the most recent writers on cardiac disease, speaks of the dilated hypertrophy of the chlorotic heart as a well-known and acknowledged fact.[5] Beau has distinctly shown that the chlorotic murmurs do not occur in simple anæmia, but only in spanæmia—serous polyæmia[6]—a condition in which the blood is not diminished in amount, but only altered in constitution, its nutritive and oxygenating properties being very much lessened. There is also an abnormal friction between the spanæmic blood and the walls of the bloodvessels, hence a rise in arterial blood-tension, hence also the formation of fluid veins at certain favourable points within the venous lumen, and at these points we hear the primary chlorotic murmur — the *venous hum*. The next abnormal acoustic phenomenon observed in these cases is an *accentuation of the pulmonary second*, unquestionably due to increase of the intrapulmonary blood-pressure, the only possible cause for this being obstruction to the onward flow of the blood; and, in a disease such as chlorosis, the most efficient cause is obviously loss of tone and contractile force in the cardiac muscle, which in this respect suffers no less than the external muscles, in all of which this loss of tone is so obvious. Less able to do its work, and with no less work to do, the heart slowly dilates, as it always does in similar circumstances; and it also slowly hypertrophies, as it must do to prevent things from coming to an absolute standstill. The dilatation is due to loss of muscular tone or elasticity; the hypertrophy to that natural law by which a hollow muscle hypertrophies when opposed to an obstacle with which it is still able to cope. And that the heart, under these circumstances, is still able to cope with its troubles is due to the fact that it always works well within its powers, and has a large reserve of energy to call upon when required.[7] As the heart dilates, the mitral and tricuspid valves become incompetent, and the resulting regurgitation gives rise to murmurs. The regurgitation through the tricuspid produces undulations in the jugular veins; and the abnormally large ventricular blood-waves, coupled with the abnormal friction of the spanæmic blood at the arterial orifices, give rise to systolic murmurs in the aortic and pulmonary areas, which are also propagated along the carotids, and may be heard on the slightest compression in every artery in the body.

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[1] *Krankheiten des Herzens*, Erlangen, 1867, S. 172.

[2] *Archives Gén. de Médecine*, 4ième série, tome ix., 1845, pp. 169 and 451, etc.

[3] *Lehrbuch der Krankheiten des Herzens*, Wien, 1857, SS. 88 and 246.

[4] *Gazette Hebdomadaire*, 1863, p. 262.

[5] *Wiener Medicinische Wochenschrift*, June 1882, S. 654.

[6] *Archives Gén. de Méd.*, 4ième série, tome ix., 1845, p. 145, p. 169, etc. In this paper, and in Marshall Hall's paper in the *Medico-Chirurgical Transactions* for 1832, vol. xvii., will be found a full account of the development of the hæmic murmur after bloodletting, showing the rapid way in which it sometimes develops, and the interesting manner in which further bloodletting temporarily arrests it, apparently by diminishing the force of the heart's contractions and reproducing a condition of anæmia. In some states of pernicious anæmia—really spanæmia—in man, similar murmurs and a similar state of heart is found. *Vide* Balfour *On Diseases of the Heart*, second edition, 1882, p. 173, note.

[7] *Vide* Rosenbach, "Ueber artificielle Herzklappenfehler," *Archiv für experi-*

Thus in advanced chlorosis we have murmurs in every cardiac area—the earliest indication of any lesion of the heart being an accentuated pulmonary second, due to loss of tone of the left ventricle. I am sure that we all agree with Hayden that the primary cardiac hæmic murmur is basic; that it is not propagated in any special direction, but radiates round the pulmonary area, in the neighbourhood of which its position of maximum intensity lies. It has already been pointed out that there are—in chlorosis—no causes of murmur operative at the pulmonary orifice which are not at least as active at the aortic opening, so that a pulmonary murmur would certainly be accompanied by an aortic murmur also, and the latter would, of course, be propagated along the course of the aorta, and more or less distinctly into the carotids. This primary murmur cannot, therefore, be pulmonary; and, indeed, on careful examination, its position of maximum intensity is found not to be over the pulmonary artery at all, but from one to two inches to the left of the sternum, in the second interspace. In this position this murmur is to be detected at its very earliest appearance, quite to the outside of the pulmonary artery: here, too, I rarely fail to detect, at least during expiration, some faint pulsation; and occasionally this pulsation is so great as to form an evident tumour, which has been made to record its own movements graphically,[1] and which, upon one occasion at least, has been mistaken for aneurism by a very competent physician.[2] Both Walshe and Hayden recognise "percussion-dulness in the second left interspace," with pulsation in the second, or second and third left interspaces, about one inch from the sternum, as physical signs indicative of dilatation of the left auricle;[3] and Dr Gibson's graphic records very distinctly prove the auricular source of the pulsation in those few cases in which such records have been obtained. There seems, therefore, no reason to doubt that in these special cases, and it is plainly to be inferred that in all cases present-

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mentelle Pathologie und Pharmacologie, Leipzig, 1878, S. 1. Also Balfour *On Diseases of the Heart, etc.*, second edition, 1882, p. 84 and p. 137, note.

[1] *Vide Lancet*, September 1877, p. 418; and *Ed. Med. Jour.*, October 1877, p. 299; also May 1878, p. 1012, and August 1882, p. 116. In the latter especially the tracings are shown to be neither arterial, ventricular, nor belonging to the *conus arteriosus*, nor to the true auricular systole, but to be produced by regurgitation from the ventricle into the auricle.

[2] *Vide* Balfour, *op. cit.*, p. 176.

[3] Hayden, *op. cit.*, p. 576; Walshe, *op. cit.*, p. 31.

ing similar if less well-marked characteristics, this murmur is propagated outwards from the dilated appendix of the left auricle.

A basic systolic murmur, occupying precisely the position of the primary chlorotic murmur, is not unknown in other forms of cardiac dilatation, and it has been long recognised as of common occurrence in cases of mitral stenosis, in which, also, a pulsation—in the second left interspace—due to the appendix of the left auricle is of no infrequent occurrence. Various explanations have been given of the position and mechanism of this murmur, but it was reserved for Naunyn[1] to prove that it really depends upon mitral regurgitation. The fluid veins formed at the mitral orifice impinge upon the tense auricular wall, and throw it into sonorous vibrations, which are conveyed to the chest wall by the appendix of the left auricle, which lies in contact with it at the base of the heart.

Naunyn's views have been accepted by Paul Niemeyer,[2] Gerhardt,[3] and all recent authorities. The basic position and auricular character of a mitral regurgitant murmur in certain cases is therefore an acknowledged fact. That the primary cardiac hæmic murmur has a similar origin, seems to be proved by these facts:—(1.) In chlorosis the heart is dilated and hypertrophied, and the primary murmurs are certainly not arterial in character; (2.) The position of maximum intensity of the primary hæmic murmur and of Naunyn's murmur is precisely the same; and (3.) The graphic record of the pulsation in both classes of cases is similar; and as it is known to be auricular in the one, it is most probably auricular in the other also, especially as it is certainly neither ventricular nor belonging to the conus arteriosus.[4] The dilated condition of the heart, even in the very earliest stage of chlorosis, is to be inferred from the apex beat being either entirely absent or only faintly perceptible—not in the usual position, but just beneath the lower part of the sternum.[5] This is due to the dilatation of the right ventricle, which dilates *pari passu* with the left ventricle, and, like a water-cushion, separates it from the chest wall, leaving the dilated appendix of the left auricle the only part of the left side of the heart in contact with the chest wall. The peculiar position of the primary hæmic murmur is no doubt largely, if not wholly, due to this. Shortly after the appearance of the primary hæmic murmur, a tricuspid murmur and jugular undulation are found to be developed. This is naturally accompanied by a pulmonary and also by an aortic systolic murmur, the active cause in the production of both these murmurs being the large blood-waves sent on by the dilated and hypertrophied ventricles, as was first, I believe, pointed out by Beau.[1] The aortic murmur is, of course, propagated into the carotid arteries. About the same time we also have a systolic murmur in the mitral area; but this is probably due to the right ventricle being now so dilated that its apex occupies the position of the left apex in health.

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[1] *Berliner Klinische Wochenschrift*, April 1868, p. 190.

[2] *Handbuch der Percussion und Auscultation*, Erlangen, 1870, Band ii. Abtheilung 1, S. 140.

[3] *Lehrbuch der Auscultation und Percussion*, Tübingen, 1871, S. 283.

[4] *Vide Ed. Med. Jour.*, August 1882, pp. 121, 128, and 129.

[5] In advanced chlorosis there is no difficulty in observing this; nor is there any difficulty even in the very earliest stage, provided the patient is quiet, but on any excitement the still powerful left ventricle forcibly asserts itself, dashing aside the feeble resistance presented by the slightly dilated right.

It is only rarely, and chiefly in a peculiar class of cases, that we have an opportunity of watching the gradual development of the hæmic murmur from area to area; but we all have frequent enough opportunities of tracing the involution of this murmur; and, if carefully observed, it will be found to die off precisely in the reverse order to that which I have described, the venous hum being the last to disappear.

With a short auricular appendix it is, of course, quite possible that the primary hæmic murmur may be pulmonary, or aortic, or even tricuspid in character. But though such a state of matters is undoubtedly possible, it must be extremely rare. I have never seen any such case myself; but, were it to occur, it would strengthen and not invalidate my position. My argument is, that the cardiac murmurs of chlorosis are formed in a dilated and hypertrophied heart, and that the primary position of the murmur is in by far the larger proportion of cases, if not in all, to be found over the left auricular appendix, where it comes up from behind just to the left of the pulmonary artery.[2] Having shown this theory to be consistent with physics, with the results of experiment, and with clinical experience, I now leave it with my professional brethren, assured that, if not now, at least ere long, it will be universally adopted.[3]

ARTICLE II.—*Puerperal Fever: its Treatment and Prevention.* By JOHN LOWE, L.R.C.S.I., L.R.C.P.E. & L.M., Lichfield.

NO subject has created more anxiety or attracted more attention in recent years than that of puerperal fever; and as I have been unfortunate enough to have had some experience of this terrible disease, I do not wish to hide that experience, and the lesson derived from it, if its publication may prove useful to others.

I was engaged in a large London practice, nearly two years ago, where the number of confinements averaged over three hundred cases annually. Scarlet fever was very prevalent in the district, and later on erysipelas broke out as well. We isolated our cases most carefully, and were satisfied that a perfect system of disinfection was observed. We visited all the parturition cases earliest in the day, and I always used, and do so now, a mixture of carbolic acid and vaseline for aseptic purposes when attending confinements. I practised, in fact, what is now called antiseptic midwifery. Notwithstanding all this, a mild case of puerperal septicæmia occurred in a case attended by my chief. The abdominal tenderness, high but variable temperature, cessation of lochia, offensive stools, and lightheadedness, ending in maniacal behaviour, combined to convince me that these were the expressive symptoms of puerperal fever poison, and Dr Bristowe, who saw the case subsequently, fully concurred in this opinion. This case, after a protracted illness, eventually made a good recovery. A few days after the above case occurred, the nature of the dire enemy was established beyond a doubt. Another woman, whom my principal had delivered of her second child, fell suddenly ill on the third day after delivery. She presented all the classic symptoms of malignant puerperal fever when I saw her twenty-four hours after the onset of the disease. I resorted to eliminate effete products from her blood, and had recourse to free stimulation and support. I cleared the lower bowel by enema, and I irrigated the uterus and neighbouring pouches with carbolic acid solution every six hours. Fifty-two hours from the commencement of the disease pulmonary embolus manifested itself. It was now painful to witness the poor woman's suffering, and it would be superfluous to describe it. She sank rapidly in the usual way. The third case, which was attended by myself, is more interesting, so I shall relate it more fully.

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[1] *Op. cit.*, 1845, p. 158 ; and *Traité d'Auscultation*, Paris, 1856, p. 336, etc.

[2] Even with an undilated auricle, this is the usual position for the appendix, "as the organs lie *in situ*." Walshe, *op. cit.*, p. 4.

[3] For a fuller account of the position and mechanism of the hæmic murmur, *vide Lancet*, September 1877, p. 383 ; and Balfour, *op. cit.*, p. 165, etc.

B. T., aged 27 years, had previous good health, but of bilious temperament. Delivered of third child on 28th Nov. 1880, with forceps and without difficulty. Did well until 5th Dec., when offensive diarrhœa began and lochia stopped. The temperature in axilla was 102°·3 Fahr., and there were other minor symptoms. I gave her a strong powder containing calomel, jalap, and podophyllin, which improved the fæces in colour and odour. Her diet was limited to broths and milk, with a little brandy occasionally. I washed out the uterus with carbolic acid solution, and the bladder with permanganate of potash solution, four times in twenty-four hours. On the 7th Dec. she fell into a thorough stupor, and could not be roused for more than two hours. After six hours she was semiconscious, but her expression was very vacant, and her movements very purposeless. There was paralysis of left arm and leg, with constriction about pharynx, and inability to articulate. She had difficulty in swallowing liquids. Incontinence of urine and fæces —the former very ammoniacal, although bladder was regularly washed out. Pulse 112, temperature 104°·5. Pallor, loathing of food, thirst, full pulse, very contracted pupils, and intense pain in right temporal region, with paralysis—sensory and motor—aforesaid, clearly pointed to localized cerebritis, the result of septic thrombus. I prescribed half an ounce of brandy in milk to be given every hour. *8th.*—Respiration an effort. Fæces offensive, and urine as before, with a specific gravity of 1029. Amblyopia, contracted pupils, and other symptoms persisting. Can speak a little. Ideation much impaired. Treatment continued, increasing brandy. Ordered her an ounce and a half of castor-oil. *9th.*—Slight offensive discharge from vagina. Temperature very variable. Uterus and bladder washed out as before. Headache is still severe, but the fæces are less offensive and more normal in appearance. I have had ice applied to her head since I diagnosed cerebritis. *11th.*—She has had no proper sleep since 5th inst. Milk has been gradually disappearing from her breasts, but there is none secreted now. Slight but less offensive uterine discharge. There has never been any pain about uterus or abdomen. Pupils less contracted. Sight imperfect. Headache persists. Urine and fæces improve. Treatment continued. *13th.*—Less thirsty. Had an hour's good sleep last night. Looks vacant. Speaking a great toil. Movements very slow and deliberate. Fæces and urine improved. Cerebral macula on left hip. In other respects as before, and treatment continued. *16th.*—Better in all respects, except that there is slight incontinence of urine. Appetite improved. Pupils act well. Sensation and motor power have returned in leg to a slight extent. She progressed slowly yet certainly afterwards, and when I last saw her on the 23rd she had enjoyed regular and natural sleep, relished her food, and said that she felt quite well, if it were not for the paralysis. She had perfect control over both bladder and rectum.

I have stated that I believe the cerebritis was caused by thrombus, and not by embolus, in this case, as, if the latter were afloat, then the lungs or liver would most likely suffer, as indeed they more frequently do. The treatment of septic cerebritis by administering brandy with easily digested but nutritious food, and the application of ice to the head, is suggested by common sense, and will be found useful in practice.

The fourth case was malignant in type occurring in a woman who was already in a hopeless condition from neglected syphilis. She exhibited the usual lung complication before death. The remaining five cases came under my notice early; and although each was in a very critical condition some time during the attack, yet they all recovered. One had periuterine inflammation for some time after, and another had uterine phlebitis with a large pyæmic abscess of the calf of one leg. I attribute recovery in these cases partly to their coming under treatment early, and partly to the good constitutions of the women. In each case I encouraged free action of the liver, bowels, and kidneys, and I had frequent recourse to stimulation when it was indicated by past history or present symptoms.

I am strongly of opinion that by early and repeated aseptic intrauterine injections, a rapidly acting cholagogue, washing out the bladder, if necessary, with some aseptic solution, and the timely and liberal use of stimulants, will avert death in many instances. It is no use giving the nurse instructions to wash out the uterus; we must do so ourselves by means of a long tube in the uterine cavity itself. Ammonia and brandy I regard as the medicines for the disease; indeed, when food is refused, brandy is not only most grateful to the patient, but is peculiarly well adapted to supply the place of ordinary food, and no amount of fever or other symptom contra-indicates stimulation when changes so destructive to the vital fluids and tissues of the body are in terribly rapid progress. To give aconite or veratrum viride in such cases is, in my opinion, as unscientific as it is useless; and yet these remedies have been vaunted and are actually used by men of undoubted ability and eminence. To get rid of a fermentative poison from the blood we must adopt some such practice as I have indicated, and not stop to theorize about the physics of the circulation. We must, in other words, support vitality and eradicate the poison. That salicylates and sulpho-carbolates taken internally do not rectify the turbid urine in puerperal fever I am convinced from experience; and I would strongly urge that all depressant remedies are both hurtful and dangerous. It would be a waste of time and space for me to speculate on the etiology of puerperal fever, still more to discuss the appropriate term for the disease. In the same run of cases we meet with malignant puerperal fever, puerperal septicæmia, and pyæmia. For my part, I believe that either may give rise to the other, and that scarlet fever or erysipelas may undoubtedly cause any of the above forms of puerperal mischief. This is my experience, and I have watched more cases under the care of others than those referred to in this paper.

I have now to call attention to what would appear to have received least attention: *how best to prevent contagion.* The golden rule hitherto has been to leave off attending confinements altogether for several weeks. This is generally a safe rule, but it is often a mighty inconvenient, and, I believe, a most unnecessary one. It occurred to me that by the strictest asepticism the spread of the disease might be prevented. I remained as short a time as possible in the lying-in room when attending confinements, lubricated my hands well with vaseline and carbolic acid, and had the carbolic spray playing between the patient and me during operations. The labour over, I washed out the uterus and vagina with carbolic acid solution in the usual way. Now, this proceeding has the advantage of cleanliness and safety, and is unobjectionable. From the moment I took these precautions there was not another case of puerperal fever in the practice, although I continued to attend cases as they turned up, and I cannot see how any one can fail to appreciate the efficacy of the treatment pursued. The inconvenience of the spray and its formidable appearance are not valid arguments against the practice: one additional puerperal case would be more inconvenient and more formidable. I will not pursue this subject further now, but merely give the foregoing remarks—made with much sincerity and earnestness—to the profession for consideration.

ARTICLE III.—*Case of Extra-Uterine (Tubal) Pregnancy.* By C. H. THATCHER, F.R.C.S.E.

(*Read before the Obstetrical Society of Edinburgh, 19th July* 1882.)

MRS O., age 39. Had always had good health. Mother of four children. There were seven years between the births of the first three children, three years between the third and fourth, and three years from time of fourth child's birth to date of patient's death. The patient frequently complained of severe pain in her right side, in the abdominal region, which pain had existed for fully two months, and was relieved by stooping forward. She had also frequent attacks of vomiting, and bowels were much constipated. She was much troubled, for some time previous to her death, by domestic difficulties. Her first confinement was a very severe one, and she was confined to bed for fully three months, suffering a great deal of pain. Probably this was a peritonitic attack. Her other confinements were natural, with the exception of the last living child being delivered by forceps. The patient died on a Friday at 2 A.M.

On the day previous to her death she complained very much of inability to make water, but succeeded in making a good deal that night about 10 P.M. She then expressed herself as being quite relieved and free from pain. Some time after that she had the inclination to pass water, but failed. At 11.15 P.M. she said she felt very ill, and rubbed the abdomen as if in great agony. A few minutes afterwards she sat up in her bed, gave several heavy sighs, and got ghastly pale. She continued very pale from that time, namely, 11.30, till 2 A.M., when she died quietly. She was conscious to time of death, but was unable to speak. I was not called to see her till after death.

Post-mortem Examination, which was kindly conducted by Dr Littlejohn.—Limited hæmorrhage into pelvic cavity. Loops of small intestine congested, evidently from commencing peritonitis, and a few soft masses of lymph about intestines.

Uterus and appendages were removed. Uterus presents usual pear-shaped form, is 4¼ inches in length, 3 inches in breadth, 1¾ inch in thickness. In removal of uterus cervix was divided near to vagina.

Peritoneum on surface of uterus was apparently normal, except at one or two places where tenacious bands were attached to it, evidently result of old adhesions. A probe can readily be passed into uterine cavity for fully 4 inches.

The broad ligament on left side appeared normal, but ovary on this side was enlarged.

On making a section of this ovary the cut surfaces presented a number of small openings about the size of millet seeds, and a body ¾ of an inch in diameter, consisting of a distinct wall containing a quantity of soft granular matter, apparently a corpus luteum of pregnancy.

Right Broad Ligament.—On this side, commencing about 1½ inch from uterus, was an irregularly-shaped mass, somewhat lobulated on surface, and showing patches of dark blue colour. This mass was about 3 inches in length. At the outer part of this mass there was a rupture, protruding from which there was a large quantity of chorionic villi. The ruptured sac presented a smooth inner surface, to which was attached the umbilical cord. The fœtus had appearance about two and a half months. This sac extends along almost whole length of the tumour already described, into which the finger can easily be passed. In the walls of this cavity could be felt a number of hard nodules, apparently of extravasated and coagulated blood.

Cavity opened up.—Walls contained chorionic villi in the outer part, and firm coagulated blood in the inner part.

The *ovary* on this side was much smaller than the other, and flattened up against surface of broad ligament. On making a section through the ovary two bodies were exposed, consisting of distinct walls with granular contents, somewhat similar to body described as found in left ovary. The ovarian extremity of right Fallopian tube could not be detected. The ovum evidently became arrested at the outer part of Fallopian tube, as there was fully an inch of the inner or uterine portion of tube involved in the tumour.

Vertical sections were made through this uninvolved portion of Fallopian tube, which was found to be patent.

The *uterus* was opened from the front. Its anterior wall was ¾ of an inch in thickness. In the cavity of the body there was a well-marked decidua.

POINTS OF INTEREST.

1. Right ovary was of small size, and the two bodies found in it.
2. Left ovary. Its large size, and the body contained in it.
3. The relations of the Fallopian tube on right side to cavity containing fœtus.
4. Conditions of walls of uterus with distinct decidua.
5. The corpora luteum of pregnancy was on left side, but the pregnancy occurred in right tube.

ARTICLE IV.—*The Pathology of Rickets.* By G. R. GILRUTH, F.R.S.E.

RICKETS is a disease of childhood, beginning, it may be, during intra-uterine life, but rarely occurring much later than the third or fourth year. This disease may arise spontaneously. Some surgeons believe that it is associated with syphilis. No doubt it is a disease which is very likely to attack the children of syphilitic parents, but it seems beyond a doubt that it may occur in the offspring of healthy people. Mr Jonathan Hutchinson, in addressing the members of the Pathological Society in the discussion upon rickets, said "it was probable that syphilis and rickets often co-existed in the same patient, but he firmly believed that the two diseases were essentially and totally distinct from one another, and due to different causes, and that to class them together in one category was to be guilty of a grave clinical error" (*British Medical Journal*, 25th Dec. 1880).

The child may be healthy when born, and yet, after having suffered from some debilitating disease, and from having been reared in a damp and unhealthy atmosphere, become the subject of this disease. It appears that rickets occurs more frequently in damp than in dry climates. In India it is said to be very rare. Roth seems to think that it is caused by the want of proper nourishment (*Edinburgh Medical Journal*, July 1881). Rickety children are easily recognised. The head is usually large, the face pale, the lips blue, the abdomen protuberant, the muscles soft and flabby, and the circulation languid. Trousseau believed that the brain often grew faster than naturally in rickety children, owing to the softened cranial bones presenting less resistance to its development. In one child who had suffered from rickets, and in whom hydrocephalus had been diagnosed, on the skull being opened it was found to be completely filled with brain substance (Dr Hilton Fagge). This disease, as has already been stated, may begin during fœtal life. Cnopf mentions the case of a woman who gave birth to several rickety children. Erichsen says it is a disease of early life, frequently met with in scrofulous children, and never occurring later than puberty, and that the structure of the bones becomes changed, there being an excess of organic substance with a deficiency of earthy matter. Killian, he adds, believed that the disease always began in the cranial bones, and that the forehead was unusually large in children suffering from rickets. The bones are found to be soft and flexible, the weight of the body and the action of the muscles causing them to become bent. When the bones regain their nutritive power, however, they become hard and unyielding, but retain the curved form acquired during their softened condition (Syme). These facts are worthy of consideration, as they have an important bearing on the question of treatment, both by mechanical means, as in straightening of the bones, and in the employment of constitutional remedies. The bones of the extremities are often stunted in appearance, with large articular ends, and the curves in the bones may vary in direction. According to Sir James Paget, a rickety tibia is usually short, and the articular ends enlarged, the shortening being due to the imperfect formation of the ends of the bone. The distortion in knock-knee is caused by the lowering or abnormal length of the inner condyle of the femur; the ligaments of the knee and ankle joints are relaxed and the foot flat. The tibia may also be malformed.[1] In bow-leg the distortion is produced by the bending outwards of the tibia and fibula; the femur may also be slightly curved and the pelvis broad; the ligaments are relaxed, and the foot usually turned inwards. Rickety bones are easily fractured, and are said to unite by cartilage. On being boiled they are found to contain a large amount of animal matter and little or no gelatine. The blood contains red corpuscles of several sizes, and a considerable quantity of granular matter (Goodhart). Visceral enlargements are frequently found to be present, the liver, spleen, and mesenteric and lymphatic glands being the organs most frequently affected. The liver, on thin sections being made, is found to be very transparent and to resemble glue, and the spleen often presents a similar appearance (Sir William Jenner). The ligaments become relaxed, and partial dislocations are apt to occur (Holmes, *System of Surgery*). This disease seems to have been described by English authors at an early date, Glisson having written a treatise on it in 1650, and Whistler in 1684 (Norman Moore). Mollities ossium is a disease which occurs in adults, and in it the bones become very soft, and much pain is felt.

On examining some of the preparations contained in the museum of the College of Surgeons of Edinburgh, in the first specimen, the shaft of the femur was found to be bent; in the second, both the neck and shaft of the femur were curved; in the third, the tibia and fibula were curved at their lower third; in the fourth, the fibula was bent; in the fifth, the radius and ulna; in the sixth, the bones of the spine and pelvis were distorted; and in the seventh, the radius, ulna, and humerus were bent. In fact, it seemed as if almost all the bones may become affected in rickets. The bones have a chocolate colour, and their appearance gives the idea that there is a deficiency of ossific matter. The dark brown colour seems to be very characteristic of the disease.

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[1] "The most marked tibial deformity consists in the inward development of the shaft, and flattening of the inner portion from before backward, ending in spines or buttresses on the inner side."—Macewen, *British Medical Journal*, 18th Oct. 1879.

ARTICLE V.—*The Medical Congress of Seville.* By J. BOYD, M.D., Slamannan.

(*Continued from p. 242.*)

Session of the 13th April.

THIS was opened at the usual hour, and after the minutes of the previous session being read by the Secretary, Dr Lasso y Cortezo, and approved of, *Dr Gutierrez* read a highly meritorious paper on "Las Letalides," mortal eruptions, described by Dr Rubio in one of the conferences of the Institute of Operative Therapeutics of the Hospital de la Princesa. The principal conclusions of this most interesting production are the following:—1st. The malignant or lethal eruptions accompany cancer with extraordinary frequency, and their recognition possesses a clinical interest of great importance. 2nd. They are histologically combined in more or less complex order, following for the most part a natural gradation in their development when epithelial carcinosa serpiginosa is concerned. 3rd. In the other species of cancers they are the manifestation of the local infection. 4th. They manifest the diagnostic of these neoplasms when originating in glandular organs, and the ganglia in the vicinity now tumefied: it is also permissible thus to classify special ulcers that coincide with tumours in the same region. 5th. Their presence indicates the malignity and diffusion of the neoplasm they accompany, and in so far the disastrous fate of the individual. 6th. As these *letalides* are not destroyed along with the cancer the cure is impossible, since from each one we see new germs budding. 7th. The greater number of relapses of cancers are due to the rapid development that these *letalides* acquire after the extirpation of the former. 8th. When any of the varieties of this malignant eruption exists in any case, the surgeon should never attempt an operation if he has no wish to shorten the life of the patients, and this even when the nearest lymphatic glands are not tumefied.

This work was accompanied by an artistic piece executed by Señor Zofio, which represented a remarkable case of *letalides* developed two months after the amputation of a mammary cancer in the cicatrix itself. At the same time a large number of histological preparations of the skin affected by *letalides*, executed by Dr Lopez Garcia, which perfectly exemplified the histological theory of these eruptions so splendidly expounded by Dr Gutierrez.

Dr Sota y Lastra averred that in all his practice nor in the works he had read had he found anything equal to this. Bazin had said that cancer was not a morbid unity, but the ultimate evolution of herpetism and *reuma*. He alluded to the views of Dr Rubio, who stated that in all the operations on the mamma he performed he noticed eczematous eruptions round the nipple. Payen, in a communication to the Academy of Medicine of London, had described and classified distinct species of *letalides*, thus—*Letalide maculosa*, *Let. papulosa*, *Let. ulcerosus.* He mentioned that mammary eczema might originate gangliary infarctions apart from the cause of cancer. The *Letalide maculosa* presents itself in encephaloid and scirrhus of the mamma, appears and disappears. To distinguish them we have only to inspect the breast. The most common form is the *erysipelas indurata*, termed by Velpean *cancer de cuirasse.* It first presents itself in small points like flea-bites, and gradually extends till the skin of the chest is covered with a kind of parchment, leaving the woman as if enclosed in an iron corselet.

Dr Osio spoke of a new operation for staphyloma, describing his mode of procedure. Dr Chiralt acknowledged Dr Osio's able exposition, and thought his plan resembled that of Señor Critchet, the difference between which and his own were pointed out in Dr Osio's reply to Dr Chiralt, who then read a paper on the best means of remedying strabismus in children under seven, and thought that tenotomy ought to be regarded as the last resource.

Dr Adame read his important communication on the "Cause of the Excessive Mortality of Children," a problem equally interesting to the physician, the legislator, and the public administrator.

Dr Robert said the Señor Adame had exhibited the evil, but the remedy proposed by him did not seem practicable, neither by the governors nor by individuals in their limited sphere of action. His attention had been for long fixed on the fact that Spain presents the greatest national mortality according to statistics. In Oviedo the deaths are 100 per 1000, the maximum in Madrid amounting to 400 per 1000. There must be something special in our native land to account for a mortality so excessive. Two circumstances are the principal factors in the enormous death-rate of Spain—the want of the use of water, and the poor alimentation. Our country is an educated land, but is far from being an enlightened land. It must be confessed that the Spaniards are afflicted with hydrophobia. There are thousands and thousands who have never washed since they were born. May this not be one of the causes? On the other side, the races of our soil are frugal in general, but they abuse frugality. This is the country where they eat least. The field labourer feeds himself merely with sunshine and bread. There are others referable to morality. We wonder at the severity with which foreigners keep the Sabbath. On this day, with us, we work more or less irregularly, and on Sunday, instead of resting, if a current flows, it is certainly not to the fields, but to the *café*, the theatres, the taverns, and bull-fights, where no sun influence is received, but, in exchange, others which it is well to pass hastily, nor indicate closely, as being known of all. From all these reasons the means indicated to diminish the mortality are the following:—1. Corporal cleanliness, baths, ablutions, to maintain the suitable organic tonicity. 2. Augmenting the alimentation, improving it in quality, and making it economical. 3. Complete rest on festival days, and seeking recreation in the country. 4. Establishing public gymnasia everywhere, thereby resuscitating the Olympic Games.

Dr Gutierrez praised the previous speech, and said another cause still more important must be taken into account in relation to the mortality of the first year. This was the complete absence of hygiene as regards lactation. Mothers had no other rule for bringing up their children than capricious notions. They leave their offspring in the arms of the nurse, and the most accomplished send them away to be nursed, delivering them into mercenary hands. It must be agreed that the infants who die sink under a gastro-intestinal malady or symptomatic cerebral. It is well known that the intestinal mucous glands are not developed until a certain epoch of life, and till then the organization cannot assimilate the nutrient principles that are ingested in the form of pap, etc. The mothers that submit their children to such ill-timed feeding are truly their executioners. We must protest against the recently introduced use of the "Harina Lacteada," which places the lives of the babes in the hands of foreign merchants.

Dr José Maria Puelles read another paper on the same subject, the conclusions of which are:—1. No sanction for habitations requiring interminable flights of stairs, nor such as are too low, damp, and ill-ventilated. 2. The streets to be wide, with rows of trees, sewers cleansed and irrigated. 3. Strict compliance with the sanitary laws. 4. Institution of asylums for the children of work-women and sick mothers, while the former are at work, and till the second recover sufficiently for the performance of their maternal duties. 5. Formation of societies for the protection of infancy, adapted to the end in view. 6. By means within the reach of all, imparting sound instruction, and introducing epitomes of hygiene in the schools, adapted to all grades of intelligence. 7. By wise arrangements diminishing the imposts to render them easier on the necessitous. 8. Purify society, where it errs from virtue, by the force of the example of those whose elevation renders morality peculiarly obligatory.

The meeting separated at 5½ P.M., to resume session later in the same evening.

Señor Gomez Torres commenced proceedings by directing attention to artificial premature labour, which took its first commencement in England. There are different indications for this operation, as when there is a considerable straitness, through which the infant, when at full time, could not pass. The distinct diameters of the head and pelvis are required to be known. As the operation is indicated when the head diameters are at least 65 millimetres, it might be effected at the seventh month. At 62 millimetres premature labour is indicated at the first and second weeks of the eighth month. In maladies that endanger the life of the woman this is also indicated, as also in those which, unconnected with pregnancy, likewise imperil it. In the case of a robust female whose pregnancy has reached the eighth month, sometimes tremulous movements of the fœtus occur, followed by its death on the succeeding day. Parturition might be induced in some instances. This procedure was believed to be also so indicated in some cases of organic lesions. One of the most efficacious means is puncturing the membranes and drawing off the liquor amnii; but as the object of this is to preserve the life of two beings, this should not be attempted before the period of viability. An English professor proposed the puncturing the amniotic bag high up. It is doubtful if partial evacuation is capable of inducing parturition, as has been spontaneously observed on many occasions. Another inconvenience is, that in this fashion the operation is done in the dark, it being impossible to ascertain whether we perforate solely and exclusively the amniotic membrane. The dissection of the membranes at greater or less elevation is dangerous and inefficient, the connexions between them and the surface of the uterus and the superficies of the ovum being very slender. Another plan is the dilatation of the neck of the uterus, thus producing a contraction of the organ; but something more is required to stimulate these. To prepare for the separation it is necessary to begin fifteen or twenty days before by two or three hot baths daily, previously introducing a speculum to introduce the fluid thereby into the vaginal canal. By tepid injections slight pains can be induced, the patient feeling them after the gush of fluid. After eight or ten days of this treatment we are in a position to provoke the labour. If the patient be primiparous, the laminarum must be introduced instead of the prepared sponge, the former being inserted for eight or ten hours. If after this even a small dilatation be noticed, sponges of increasing bulk may be employed, by which sometimes parturition has been induced, as also from the application of a thick tampon into the vaginal canal; and this once begun, generally we require only to watch as required by circumstances. Between premature and enforced labours there are special differences. Forced labour is employed where there is no truce, as where, from eclampsia, hæmorrhage, or placenta prævia, it is necessary to extract the fœtus at all hazards; and artificial labour is practised when no such imminent danger is present. He cited a case where parturition occurred after two or three applications of the prepared sponges in regular conditions, and the result of three living children was obtained. In another case, where the antero-posterior diameter of the mother was 63 mm., he practised the above operation, but the child having a larger diameter still, he had to apply the forceps.

Session of the 14th April.

Dr Duhourcaut read his memoir on the "Value of the Mineral Waters of Cauterets in the Treatment of Pulmonary Phthisis," at the end of which he was applauded.

The Secretary, *Señor Buissen*, read a paper from Dr Carreras on the "Simplest and Exactest Mode of Determining Daltonism."

Dr Osio remarked that, in his opinion, the best method was that of Hobgreen.

Dr Grancher made a short communication on "Three Varieties of Pleuritic Rales." 1. That in which the tympanitic sound occurs, respiration exaggerated, and the pulmonary vibration equally increased. In this case it may be concluded that the lung is sound, and the pleurisy will take a simple course. 2. In this very common variety, in which tympanism is heard, the respiration is feeble, yet with a certain roughness, and the pulmonary vibration exaggerated. Here the lung is diseased, congested, or invaded by tuberculosis. It is easily understood that in this case the prognosis is much graver, as in proportion with the diminution and resolution of the pleurisy the pulmonary mischief augments and develops. As the tympanism of the pleurisy diminishes and the *sous-mattité* remains, the respiration likewise diminishes, and the tuberculosis becomes more manifest. 3. In this variety the tympanism is always evident, the respiration is diminished, and the vibration very weak. He stated he had seen the last, where there existed a large effusion in the length of the mediastinum, compressing the lungs or the large bronchial branches, or in some aneurisms of the aorta.

After an interval the meeting resumed at 8½ P.M., when *Dr Jacquemet's* paper on the question, "Is the Criminality of the Culpable to be based on the Duration of the Cure of the Wound?" was read in his absence by Sr. Maderas.

Dr Muñez Barreda read another on the same theme.

Señor Muñez rose and said that we should attend solely to the depth, extent, and other conditions of the wound, and not to the criminality. The conditions of temperament, diathesis, etc., do not favour the aggressor, but are factors in the damage done by him.

Other members also considered that the medico has only to occupy himself with the characters presented by the wound, and not by the premeditation of its infliction, and confine himself to medical questions. As to individual conditions, we all know that the same wound will heal in one person in seven days, in another will require ten or more. It is a folly in legislation to make mathematical dispositions. In medicine there can be no mathematics.

Señor Pezjuan and *Señor Vasquez* and *Dr Osio* also spoke in the same strain, and agreed on the necessity there was for reforming that portion of the Spanish code which makes the extent and duration of the wound inflicted the measure of the culpability of the criminal.

After other matters were discussed, the meeting separated at half-past ten.

Session of the 15th April.

The meeting being opened at 12½ P.M. by the President, the minutes of the previous session were read and approved unanimously

Señor Don Juan de la Sota read a statement of the apparatus presented by Mr Valenzuela. This gentleman returned thanks to the committee for the highly favourable certificate which had been conferred on his productions.

Dr Pizarro read a paper on the "Water Supply of Large Cities," expounding the sanitary conditions involved.

Dr Morales read an essay on "When and How should Operative Surgery Intervene in the Treatment of Suppurative Arthritis?" In this he gave an exposition of twenty-one cases in his private practice treated antiseptically, and did not believe that anchylosis or death was the necessary termination of the majority of these cases, as stated by authors.

Dr Roel read a paper on the "Pathogenesis of the Principal Diseases," in which he advanced a series of proposals for institution of cabinets of inspection and recognition in hospitals. He displayed three genealogical tables of the leading maladies, as well hereditary as acquired, and made extensive consideration on the pathogenetic principle in these.

Dr Robert paid high compliments to the talents and learning of Dr Roel, referring to his book on the *Etiology of Pellegra* as a labour equivalent to the life-work of three men, but thought him a little exaggerated in some of his views.

Señor Coca read a paper on "Strangulated Hernia," in speaking to which

Dr Salado detailed the present precision and success of the operation. He mentioned he had treated four hundred cases of abdominal wounds, many of these penetrating, and with the application of ice he had the best results. His speech was highly applauded.

After a paper by the Secretary, *Señor Madera*, on the "Treatment of Intestinal Occlusion,"

Señor Rubio made a verbal communication on "Rupture of the Vertebral Ligaments." He commenced by reference to the well-known fact that, besides fracture of bones, the tendons and ligaments are subject to the same lesion. He proposed to investigate the manner in which this was effected, and demonstrated that when this injury was present the action was manifested at a point very far distant from their seat, and that, comparing these lesions, common injuries were found of unknown causation. He called attention to what happened when an individual suffered from a twisting of the foot, which at times required no treatment, and at others gave trouble for several days; while not only the ligament becomes tumefied, but also the anterior part of the malleolus, where, besides the repetition of the violent movement causing pain, this becomes permanent, presenting the characters of a synovitis; while also the symptoms of periostitis and caries supervene, taking the name of white swelling, sometimes so rebellious to therapeutics as to necessitate amputation. How are these phenomena, appearing several days after the accident, to be explained? Science designates them with the name of *irradiation*, the pain and the other symptoms diffusing themselves, which occur, not from continuity of tissues, but at a distant point. He took a practical instance of this, and demonstrated that this action depended on the essential constitution of the ligament, as connective element develops its action on the most yielding tissue, the fatty, where first appears the fluxion and augmentation of the cellular tissue. The process advancing, the aponeurotic portion of it becomes affected, the intermuscular fascia, the interosseous, then the articular capsule, the periosteum and the bone following, all implicated, but always according to the nature of the tissues, this being termed the *law of the morbid responsibility of the textures.* If, for example, the posterior vertebral ligaments are fractured by a fall, in spite of the great resistibility with which they are endowed, if to the act of traumatism the action of the muscles is operative, so that the resultant of these forces are concentrated at one point, we can imagine the great sum of force which this represents; but if the force exceeds the resisting power of a single vertebra or ligament, the resultant is destroyed; one of the vertebral ligaments giving way, the column having no anterior muscle, while there are strong posterior muscles, the anterior ligaments yield, and, influenced by the physiological action, the column is inclined backwards. Hence the patient must bend himself forwards very gently, contracting the pectoralis, etc., so as not to fall, causing thereby an angular curvature of the column. He believed that many of the cases met with in practice have no other origin, although others are dependent on struma and other affections. To the above-mentioned principle he ascribed Pott's disease. If the posterior ligament be affected, an affection of the meninges and medulla must supervene, especially in the anterior tracts. The ligaments may be partially or entirely broken; in the latter case the anatomical conditions may vary, causing bendings; but in the former set of cases they are not so easily verified, as some modes of union exist. It occurred to him to refer to the last some forms of partial paralysis. The rupture of the posterior or vertebral ligament only produces a slight bending, implicating the affected vertebra and that superior and inferior to it. The inference is that if a patient presents a small angularity and corresponding paralysis, we may diagnose a fracture of the posterior ligament; if the curvature is great, that of the anterior. At times the spinal marrow may remain intact, but this is not observed when it arises from propagation by the meninges, there being here lesions of sensibility. There are many cases without incurvature from the rupture being partial, and here the thermometer shows the affected point, by ascending 3, 4, or even 5 degrees above the rest of the surface. There is acute pain, and a sensation of constriction so strong as only comparable with that of ataxia locomotrix. As to the treatment, this is almost identical with other fractures—position and immobility—having, like other maladies, a period of curability and incurability. The plaster of Paris bandages gave the most desirable results. The apparatus de Escayo is invaluable in these cases; but we do not enlarge about it, as being so well known to all the gentlemen present. (Great and thundering applause.)

After an interval of ten minutes, *Dr Robert* detailed a curious case of spasmodic bronchitis in a hermaphrodite.

Señor Verneuil made a communication on "Latent Diabetes under a Surgical Point of View."

Dr Pousie's paper on "Pellagra" insisted on maize-eating being the cause of this malady, as according to French and Italian opinion.

Dr Roel dissented entirely from this view, as he had found the disease in question in regions where no maize was consumed. The presence of it in patients who fed on wheat contradicted the opinion referred to. It is surprising the tenacity with which notions are held which are more than two centuries behind, after repeated polemical and ineffectual inquiries into the cause, nature, and therapeutics of pellagra.

Dr Sota corroborated the ideas of the previous speaker, stating that he had seen some few cases of this disease in Seville, where the use of maize is unknown; when, as near Asturias, where it is endemic, in Santander and its territory, where maize is exclusively used, no case is to be found. It is said to be owing to *remainder* maize, the sun, and other causes; but these same causes are found in other countries, such as Mexico, where there is no pellagra. In Italy they still believe it depends on the use of this aliment, but he saw with satisfaction that the Lombard physicians, especially those of hospitals, regarded it as a diathetic malady, as also Bazin considered it.

Senor Cantero described a severe case of gunshot injury on the forehead.

The highest compliments in the power of the Congress were paid to Dr Rubio, as also to the President, Dr Rivera, who was deeply affected, and expressed his gratitude for the honourable distinction conferred on him in graceful terms. He cordially saluted the foreign and native gentlemen who had assisted at the Congress, and with these words concluded the labours of this brilliant scientific assembly.

ARTICLE VI.—*Report of the Ear Dispensary, 6 Cambridge Street, Lothian Road—Surgeon,* J. J. KIRK DUNCANSON, M.D., C.M., F.R.C.P.E., F.R.S.E.—*from July* 1881 *to end of June* 1882. By A. K. CHRISTIE, M.B., C.M.

THE following table of the diseases met with and treated at the Ear Dispensary during the last year shows a considerable increase in the number of patients over former years. It also, we hope,

DISEASE.	No. of Cases.	Sex.		Side Affected.			Result.			AGE.
		M.	F.	R.	L.	Both.	Cured.	Improved.	Still under Treatment.	
Diseases of the Auricle.										
Microtia,	1	...	1	...	1	...	...	...	...	4 months, 1 *a*.*
Appendices on and in front of tragus,	1	1	...	...	1	...	...	...	...	18 years, 1 *c*.
Fissure of lobe,	2	...	2	2	...	...	...	2	...	35, 41 years, 1 *e*, 1 *f*.
Fibroma of lobe,	1	...	1	...	...	1	1	...	...	9 years, 1 *b*.
Polypus,	1	1	...	...	1	...	1	...	...	28 years, 1 *d*.
Eczema	15	5	10	3	3	9	15	...	...	1 *a*, 5 *b*, 1 *c*, 4 *d*, 1 *e*, 1 *f*, 1 *g*, 1 *i*.
Fistula Auris Congenita,	1	1	...	...	...	...	...	1	...	25 years.
Diseases of External Auditory Meatus.										
Over-patency,	1	...	1	...	...	1	...	...	1	26 years.
Foreign Bodies,	16	11	5	7	9	...	16	...	...	4 *b*, 2 *c*, 2 *d*, 1 *e*, 3 *f*, 3 *g*, 1 *i*.
Eczema,	12	4	8	2	1	9	9	3	...	2 *b*, 3 *c*, 3 *d*, 1 *e*, 1 *f*, 1 *g*, 1 *i*.
Furuncular Abscess (Otitis Externa Circumscripta),	3	1	2	1	2	...	3	...	...	2 *c*, 1 *g*.
Diffuse Inflammation (Otit. Ext. Diff. Acuta),	3	...	3	2	...	1	3	...	...	1 *d*, 1 *e*, 1 *f*.
" " " " " Chronica,	8	6	2	1	2	5	8	...	...	2 *c*, 5 *d*, 1 *e*.
" " " " Desquam. Chr.	2	1	1	1	1	...	2	...	...	1 *d*, 1 *f*.
Periostitis,	3	3	...	2	...	1	3	...	...	1 *c*, 2 *d*.
Hyperostosis,	6	5	1	...	1	5	...	6	...	1 *b*, 1 *c*, 1 *d*, 1 *f*, 2 *i*.
Exostosis	1	1	...	1	...	...	...	1	...	48 years.
Wax (Ceruminosus Obturans),	139	98	41	14	22	103	139	...	...	12 *b*, 32 *c*, 34 *d*, 14 *e*, 16 *f*, 12 *g*, 11 *h*, 8 *i*.
Laminated Epithelial Plug (Keratosis Obturans)	8	6	2	4	1	3	8	...	...	1 *b*, 1 *c*, 2 *d*, 2 *e*, 1 *g*, 1 *h*.
Cholesteatoma,	1	...	1	1	...	...	1	...	...	40 years.
Diseases of the Middle Ear.										
Traumatic Rupture of Memb. Tymp.	2	...	2	...	2	...	2	...	...	8, 24 years.
Inflammation of M. T. (Myringitis Acuta),	1	1	...	...	1	...	1	...	...	40 years.
" " " Chronica,	4	1	3	...	2	2	4	...	...	1 *c*, 3 *d*.
Otitis Media Catarrhalis Acuta,	11	4	7	3	5	3	11	...	...	3 *b*, 3 *c*, 1 *d*, 1 *e*, 1 *f*, 2 *g*.
" " " Chronica,	134	73	61	1	1	132	18	95	21	14 *c*, 40 *d*, 28 *e*, 21 *f*, 16 *g*, 9 *h*, 6 *i*.
Catarrh of Eustachian Tube,	52	29	23	1	2	49	52	...	...	21 *b*, 14 *c*, 8 *d*, 4 *e*, 4 *f*, 1 *g*.
Over-patency " "	1	...	1	1	...	...	...	1	...	35 years.
Calcareous Deposits in Memb. Tymp.,	2	2	...	...	...	2	...	2	...	2 *e*.

Tinnitus Aurium, ...	21	6	15	2	3	16	11	10	...	7 *d*, 6 *e*, 5 *f*, 1 *g*, 1 *h*, 1 *i*.
Neuralgia Plex. Tympan., . . .	13	5	8	5	4	4	13	...	...	1 *b*, 5 *c*, 4 *d*, 1 *e*, 1 *f*, 1 *h*.
Otitis Media Suppurativa Chronica, . .	141	73	68	29	29	83	71	50	20	1 *a*, 44 *b*, 48 *c*, 29 *d*, 11 *e*, 3 *f*, 2 *g*, 3 *h*.
Granulations, ...	2	1	1	1	...	1	2	...	...	2 *c*.
Polypi, ...	21	12	9	5	16	...	19	...	2	5 *b*, 12 *c*, 3 *d*, 1 *f*.
Perforations of Memb. Tymp. (dry), . .	17	6	11	5	5	7	...	17	...	3 *b*, 7 *c*, 1 *d*, 2 *e*, 2 *f*, 2 *g*.
Cicatricial Membranes, ...	7	3	4	1	5	1	...	7	...	3 *c*, 3 *d*, 1 *e*.
Synechiæ, ...	3	1	2	2	...	1	...	...	...	2 *c*, 1 *e*.
Caries of Inner Wall of Tympanum, with loss of Ossicles, ...	3	2	1	1	1	1	...	3	...	2 *b*, 1 *d*.
Necrosis Ossis Petrosi; portions of Labyrinth removed, ...	3	1	2	1	2	...	...	2	1	1 *b*, 1 *d*, 1 *e*.
Necrosis Proc. Mastoid cum Fist. et Polyp.,	4	3	1	3	1	...	...	3	1	1 *b*, 1 *c*, 2 *d*.
Otitis Med. et. Int. Syphilitica, with Menière's Symptoms, ...	11	7	4	...	...	11	...	11	...	3 *c*, 5 *d*, 2 *e*, 1 *h*.
Otitis Med. et Int. (from Mumps) with Menière's Symptoms, ...	1	...	1	...	...	1	...	1	...	17 years.
Diseases of the Internal Ear.										
Deafmutism, ...	5	3	2	...	...	5	...	...	5	4 *b*, 1 *c*.
Diseases of the Naso-pharynx.										
Cleft Palate (Congenital), . . .	2	1	1	...	...	...	...	...	...	8, 16 years
Enlarged Tonsils, ...	5	4	1	...	2	3	5	...	...	2 *b*, 1 *c*, 2 *d*.
Angina Tonsillaris, ...	2	1	1	1	1	...	2	...	...	6, 16 years.
Adenoid Tumours, ...	1	1	...	...	...	...	1	...	...	9 years.
Rhinitis Chronica, ...	5	4	1	1	4	...	5	...	...	1 *b*, 2 *c*, 1 *d*, 1 *g*.
Loss of Smell (Anosmia), ...	1	1	...	...	...	1	...	1	...	42 years.
Polypus Nasi, ...	4	1	3	1	3	...	4	...	...	1 *b*, 2 *d*, 1 *f*.
Displacement of Septum, with Hypertrophy of Right Turbinated Bones, ...	1	1	...	...	...	...	...	1	...	16 years.
Eczema Nasi, ...	1	1	...	...	...	1	1	...	...	15 years.
Ozæna, ...	6	3	3	...	...	...	...	6	...	1 *c*, 2 *d*, 1 *e*, 2 *g*.
Pharyngitis Acuta, ...	1	1	...	...	...	...	1	...	...	24 years,
,, Diphtheritica, ...	1	1	...	...	...	...	1	...	...	4 years.
,, Ulcerativa, ...	2	...	2	...	...	...	...	2	...	8, 25 years.
,, Chronica, ...	64	47	17	...	...	...	45	10	9	4 *b*, 18 *c*, 20 *d*, 11 *e*, 10 *f*, 1 *i*.
Goitre, ...	1	...	1	...	...	1	...	1	...	19 years.
Adenitis Chronica, ...	5	1	4	...	...	...	3	2	...	4 *b*, 1 *d*.
Hypochondriasis, ...	1	1	...	...	...	...	...	...	...	20 years.

* Patients under 1 year are denoted by *a*; from 1–10 years, *b*; from 11–20, *c*; from 21–30, *d*; from 31–40, *e*; from 41–50, *f*; from 51–60, *g*; from 61–70, *h*; from 71–80, *i*.

brings out distinctly the number of cases of each disease, the sex, ear on side affected, and the number of cases under each decennial period, as explained in the footnote, or gives the age where only one or two patients suffered from any one of the many forms of disease affecting the function and structures of the organ of hearing. Of the diseases noted 456 occurred in males and 331 in females.

Three affections of the ear were met under 1 year of age, 129 or so were diseases occurring under 10 years of age, 192 from 11 to 20 years of age, 196 from 21 to 30 years of age, 97 from 31 to 40 years of age, 74 from 41 to 50 years of age, 46 from 51 to 60 years of age, 26 from 61 to 70 years of age, and 21 from 71 to 80 years of age. Of the diseases of the auricle 2 occurred in infants under 1 year, 6 under 10 years, 2 from 11 to 20, 6 from 21 to 30, 2 from 31 to 40, 2 from 41 to 50, 1 from 51 to 60, and 1 from 71 to 80 years of age. Of these 8 occurred in males and 14 in females; 5 in which the right ear only was affected, 6 the left, and 10 both ears; 17 cured, 3 improved, and 2 are still under observation. Of the diseases of the external auditory meatus 20 occurred under 10 years, 44 from 11 to 20, 52 from 21 to 30, 21 from 31 to 40, 24 from 41 to 50, 18 from 51 to 60, 12 from 61 to 70, and 12 from 71 to 80 years of age. Of these 136 occurred in males and 67 in females. In 36 the right ear only was affected, in 39 the left, while both ears were affected in 128 cases. Of these 192 were cured, 10 were relieved or greatly improved, and in the case of the one remaining, over-patency of the external auditory meatus, where almost the whole of the membrana tympani could be seen, thereby rendering it very liable to injury in bathing from the impact of the waves too directly upon it, in the splashing of mud from the street, or, in fact, from most of the exposures of every-day life, protective means have been of much benefit.

We often meet with and see cases—as in tram-cars, for instance—where, on looking at the side of our neighbour's face, we can see part of the drumhead from the too much dilated and too straight external auditory meatus. The above case was the most marked I have yet met with, and the patient suffered from chronic aural catarrh of the hypertrophic form, arising from cold draughts in the ears, she said. Of the diseases of the middle ear, including therein diseases of the internal ear, where the latter affection has spread from the outer part, as shown in the table, there were 454 cases, of which 230 occurred in males, 224 in females. In 61 cases the right ear alone was affected, the left in 79, both in 314. 204 cases were cured, 202 greatly improved and relieved, whilst 45 still remain under treatment. Some have given up attendance at the Dispensary, whilst one died, where apparently the disease spread, from caries of the inner wall of the tympanum, to the lateral sinus, causing pyæmia and death. No post-mortem could be obtained. The patient was blind, but was a strong, healthy-looking man except for this long-continued discharge from his left ear, with occasional headaches on that side. Their ages:—1 was under 1 year, 57 were under 11, 84 from 11 to 20, 56 from 21 to 30, 25 from 31 to 40, 12 from 41 to 50, 5 from 51 to 60, 5 from 61 to 70, and 1 from 71 to 80 years of age. Of deaf-mutes there were 5, 3 males and 2 females; 4 of them were under 11 years of age, and 1 from 11 to 20. The four younger are still under observation. One from Holy Island, the son of parents who are cousins, hears a little, but suffers from highly-marked, in such a young child, pharyngeal and nasal catarrh, but no adenoid growths. His father accounts for the cold, his constantly running nose, from his being always out of doors, wet or dry, and exposure with his bare head to the sun's rays. The proper care and treatment of the child is being carefully attended to by the missionary to these parts.

One is an acquired deaf-mute, who, fortunately, has not quite lost all his words, and who is to be admitted next session to Donaldson's Hospital under the careful tuition of Mr Large. His sister and parents can understand a good deal of what he says, but under Mr Large's instruction in the oral or German system I have no doubt that in a year or so his speech will be perfectly understood by all. He lost his hearing from scarlet fever when about six years of age. His ears are now healed up, but were in a very disgusting and serious condition when he first came under treatment, now nearly two years ago. Large polypi projected from both ears, whilst his auricles were eczematous, and his nose and face, from the discharge from his nostrils, excoriated and scabbed. Washing out the nostrils with a tepid solution of bicarbonate or sulpho-carbolate of soda or boracic acid has cured his naso-pharyngeal catarrh and greatly helped the ears as well, as the solution escaped by his ears from the nostrils. The ears were carefully syringed with either of the above solutions, then dried, at first with Lawton's absorbent cotton, afterwards the salicylic cotton-wool, and the spiritus vini rectificatissimi of the *Prussian Pharmacopœia* carefully instilled into both ears three times a day. The dry boracic powder, thoroughly insufflated into the cavity of the tympanum, was also of great benefit in bringing about so fortunate a condition of the parts in this case.

Diseases of the Naso-Pharynx.—There were 103 diseases of the naso-pharynx treated during last year in connexion with diseases of the ear. Of these 69 occurred in males and 34 in females. The right nostril or right tonsil alone were affected in 11 cases, the left in 14; whilst both sides or the naso-pharyngeal cavity as a whole was affected in 77 cases, leaving one case in which the whole body is affected, according to the young man's ideas. Seventeen of the affections of the naso-pharynx occurred in patients from 1 to 10 years of age, 29 from 11 to 20, 29 from 21 to 30, 12 from 31 to 40, 10 from 41 to 50, 3 from 51 to 60, and 1 from 71 to 80.

Very many ear diseases have their origin in the naso-pharynx. An unhealthy condition of the naso-pharyngeal mucous membrane may, in its first or hypertrophied stage, cause closure of the faucial opening of the Eustachian tube, keeping the secretions of the lining membrane of the drum cavity of the ear pent up, giving rise to earache, frequently ending in a running ear, or the closure of the faucial opening of the Eustachian tube may lead to rarefaction and absorption of the air contained in the tympanum. The pressure of the external air on the outer surface of the drum membrane forces it inwards along with the chain of ossicles which press upon the delicate nervous apparatus of the ear, and from the long continuance of this pressure in very young infants the nervous apparatus becomes paralyzed, giving rise to permanent deafness. M. Boucheron of Paris recently read a paper before the Academy of Science, pointing out this source of deafness, and recommending for its treatment the application of iodine to the pharyngeal openings of the Eustachian tubes, and the forcing of air with Politzer's apparatus from the nostrils through the Eustachian tubes into the cavity of the tympanum, carrying with it some of the iodine to the walls of the tubes. From treatment very similar many good results have been obtained in cases of catarrhal affections of the Eustachian tubes occurring in children and young growing adults, in some cases relieving what was considered by the parents incipient deafness in their children, as *their* parents were very deaf. If unrelieved, the deafness might have come in a more serious form, and much earlier. Many cases of hereditary deafness are due to a catarrhal diathesis, which, unattended to in its early stages, leads to most distressing affections of the ear, noises and deafness being perhaps the most frequent, but in many cases causing aural vertigo with great mental distress.

Part Second.

REVIEWS.

Annual Report of the Royal Edinburgh Asylum for the Insane, for the Year 1881.

Reports of the Sussex County Lunatic Asylum, Hayward's Heath; of the Cumberland and Westmorland Lunatic Asylum; of the Derbyshire County Lunatic Asylum; and of the Newcastle-on-Tyne County Lunatic Asylum, for the Year 1881.

It would not interest our readers to write systematic reviews of asylum reports, which are generally occupied by questions of detail and management not of general, much less of medical interest. We do not know whether such reports are a proper vehicle for information on medical matters; but sometimes wise and suggestive remarks are given out in a sententious form by the medical superintendents, which may be usefully reproduced in a medical journal.

We are glad to perceive that the asylum at Morningside is in a flourishing condition. We learn from the report that "in the beginning of the year there were 821 patients, and on the 31st December there were 822. There were 339 admitted during the year, of whom 162 were men and 177 women. The total number of patients under treatment was therefore 1160. There were discharged during the year 273 patients, of whom 118 were men and 155 were women. There were 67 deaths, of whom 40 were men and 27 women. The average number of patients resident during the year was 833, viz., 421 men, 412 women."

The rate of recovery has been lower than usual, being 48 per cent. on the admissions. For the whole of Scotland the average recovery rate for 1880 was, in royal and district asylums 41 per cent., in parochial asylums 40½ per cent., in private asylums 37 per cent. The death-rate was also lower than usual at Morningside, amounting on the average numbers resident to 8 per cent., and on the total numbers under treatment to 5·7 per cent. The mortality rate for Scotland for 1880 was, in royal and district asylums, 7·7 on the average numbers resident, and 5·8 on the total numbers under treatment.

The following remarks from Dr Clouston's interesting report seem to us of especial value:—

"Like very many other diseases of the nervous system, mental disease follows certain laws of periodic aggravation and quiescence, of ebb and flow. In this it merely obeys in a morbid way those physiological laws of periodic rest and activity, and of action and reaction, which pervade all animal life. Many cases of mental disease have diurnal aggravations at certain periods of each day, just as the brains of all animals are at rest asleep one part of the day and active at another, and as the pulse and the temperature of all men differ at different periods of each day. Certain other cases are worse every other day, with the intervening twenty-four hours of calm and betterness. Other cases show a monthly periodicity of aggravation, and others a seasonal periodicity. The cases with regularly alternating intervals of mental elevation, of mental depression, and of sanity, each period lasting for many months, have long ago attracted attention, and have been called by the French 'circular insanity.' It might be better called 'alternating insanity.' Such men have three distinct lives, each of which is characterized by its own tastes, habits, dispositions, and modes of intellectual activity. One such case we have who for many months is joyous, confident, active, irritable, fond of music, drawing, and of certain persons; then he becomes depressed, miserable, diffident, slow, and cannot abide the sight of his friends of the exalted period, and takes to other company. This lasts some months. Then he gets quite sane and well as he was in his former life, leaves the asylum, and takes to a third set of persons. His bodily habits change as decidedly as do his mental moods. While exalted he can eat anything in any quantity, and digest it, is passionately fond of tobacco, and likes the cold. When depressed he is most particular as to the little he eats, and tobacco smoke and cold draughts he cannot abide. I am sorry to say the religion and morals of such persons usually follow the same laws of periodic exaltation, depression, and alternation as their likings for tobacco, etc."

Dr Clouston has been making observations on alternation and periodicity in mental disease, and is surprised to find how often they occur.

"I find," he writes, "one very definite rule to prevail, and that is, that the longer the periodic recurrences of morbid mental states prevail, the longer do the periods of each state tend to become. A man who began by getting through the round of his three mental conditions in six months at 40 years of age will take sometimes four years to complete it at 60, the periods of mental exaltation and depression and sanity being all pretty equally prolonged; and between the ages of 70 and 85 the power of the brain to rise and fall in its mental action seems to cease, and we have a condition of quiet senile lethargy left. Another law is found to prevail, and that is, that the younger the age of the patient the greater is the tendency towards a temporary relapse and periodicity of symptoms; but the tendency is far more likely to be recovered from at the earlier ages. Another fact I found in regard to this circular insanity, and that is, that educated brains are much more subject to it than those which are uneducated. But we need not go to hospitals for mental diseases to find illustrations of periodicity of mental action. The whole sane world shows it more or less in some form. Our cases are merely exaggerated, morbid instances of the law."

At the Sussex Asylum the daily average population was, male 360, female 472. The percentage of recoveries on the admissions was, male 41·1, female 28·3, average 35; on the mean number resident it is, male 12·4, female 7·1, average 9·8.

The mean annual mortality on the total number under treatment is, male 7·7, female 5·9, average 6·7.

The following remarks of the medical superintendent, Dr S. W. D. Williams, are deserving of attention in Scotland. Recognising the importance of giving employment to lunatics, he writes:—

"The nature of the employment has been varied as much as possible, and this experience seems to show to be very important. A town-bred artisan, such as a tailor, admitted in a low state of bodily health, if sent out daily for a little gentle employment in the garden, generally becomes greatly improved physically, and concurrent with the physical improvement often comes gradual restoration to reason. So also a rustic tending towards dementia, if put to learn a trade, often brightens up considerably; whereas, if sent out to work in the farm or garden, employment that he had been used to from birth, would set to work at it and perform it mechanically, and it would have but little benefit on him.

"A great deal has been written lately on this subject in Scotland, and Scotch asylums have been much lauded for the attention they have given to the subject and the results they have obtained; and the persons so writing would seem to think that they have struck out quite a new mode of treatment. This, however, is a matter that has long been considered of primary importance in this and many other asylums in England. But whereas the chief mode of employment in Scotland seems to be the very crude one of emptying the wards out on to the farm, in this asylum each individual case is carefully studied, and the employment allotted to each case guided somewhat by the patient's physical and mental condition. Of all employments doubtless the most useful and beneficial to the majority of the patients is work on the farm and garden, and in fine weather 100 male patients are regularly so employed in this asylum; but that it can be possibly beneficial to town-bred artisans and servants and shopkeepers to turn them out of doors in all weathers for many hours every day, *nolens volens*, does not appear to be likely.

"It is stated in the *Journal of Mental Science* that in the Scotch asylum where this system is most successfully carried out 409 patients out of 486 are employed, and apparently for the men the chief employment is agricultural, and for the women laundry work. The medical superintendent has gone most carefully into the matter as regards this asylum, and finds that of the 846 cases in the asylum on December 31st, 674 are habitually employed in some useful occupation, and that for the males there are 16 varieties of employment, and for the women six. Of the 357 men in the asylum on December 31st, all but 81 had been usefully employed during the year, and out of these 81, 17 were sick, 23 were hopelessly demented, 4 were blind, 3 were nearly ninety years of age, and 2 were paralyzed, leaving 24 who could not be induced to employ themselves, or were too violent to be allowed to do so.

"Thus it will be seen that, taking into consideration the much larger number of patients with organic brain disease and epilepsy, of idiots and imbeciles, in the southern asylums over those in Scotland, this asylum does not compare unfavourably with the Scotch asylums in the matter of the employment of the patients, and the medical superintendent believes he is correct in stating that the varieties of employment are much more numerous."

Granting that agricultural pursuits form the best employment for the insane, it certainly shows a narrowness of mind to hold that on this account no other occupation should be afforded. In a cold and changeable climate like ours there are many days in which out-door work is impossible. Many lunatics are old or delicate, and cannot stand a wetting; and many want the thews and sinews which make them fit to handle a spade who, nevertheless, could very profitably do some lighter work in-doors. There are varieties of taste, too, with the insane as well as with the sane, for all men do not care about out-door work. Some hate rough work who readily get interested in what demands fineness of execution. On this account there ought to be the utmost variety of employment afforded. We do not say, however, that there is no variety, especially in the larger asylums in Scotland.

We have noticed in several reports of Scottish asylums a claim of superiority in the treatment of the insane, which seems to be based upon the greater amount of freedom given, or alleged to be given, to lunatics in Scotland, which consists in pushing liberty to what may be called the debatable verge of safety to the public or to the lunatic himself. Patients are walked about the grounds in charge of keepers that were formerly shut up in airing courts, and in many asylums, instead of locked doors there are handles, so that the lunatic may run out, of course to be chased and caught by the attendant, who thus requires to be ever on the alert, like boys playing at Willie Wastle. Well, this may be an improvement, and we are inclined to think that it is so; but after all it does not constitute any decided ground of superiority, and we should much better like to hear of an advance along the whole line. If the insane in Scottish asylums are happier and better cared for, if recoveries are more frequent, if the deaths are fewer and suicides and accidents rarer, and if there are more discoveries in pathology and therapeutics, we hope that Scotland will get the credit of it. We advise those interested in lunacy in Scotland to keep their eyes open to the existing defects in its administration, not to allow any lapses into mere parade or routine, and to be careful of arousing the jealousy of their southern colleagues by laying too much stress on minor improvements.

The rate of recovery in the Cumberland and Westmorland Asylum, calculated on the admissions, is 49·1 for males and 60 for females, 54 for both. In the Newcastle Asylum the recovery rate is 29·8 for males and 38 for females, 33·6 for both; but after subtracting 13 chronic cases received from the union in Berwick-on-Tweed the recovery rate becomes 38·3. In the Derby Asylum the recovery rate is, for males 32·3, for females 41·2, for both sexes 37·2.

The mortality rates, calculated on the average number resident, were, in the Cumberland, Newcastle, and Derby Asylums respectively, 9 per cent., 11·1 per cent., 12·9 per cent.; on the number under treatment they were 7·1 per cent., 7·9 per cent., and 9·7 per cent.

Dr J. M. Lindsay of the Derby Asylum remarks that 198, being one-half, of his patients are above middle life, from 45 to 85 years of age, as many as 120 being from 55 to 85 years of age. This tends to keep down the rate of recoveries and increase the mortality.

Dr Lindsay deduces from a table which he gives us that the unmarried state is favourable to insanity, though other circumstances must be taken into account in considering this question. The number of admissions of insane married women is greater than of insane married men. Mr R. H. B. Wickham remarks that the alleged causes of insanity in the admissions to the Newcastle Borough Asylum show that of the 50 women admitted, 12 cases, or nearly one-fourth, were distinctly traceable to disorders connected with child-bearing, while there were other cases in which, though this could not be given as the direct cause, it had played an important part.

Lezioni di Patologia e Terapia, Speciale Medica. Dal Professore FRANCESCO ORSI, Presso l'Universita di Pavia. Milano: 1878–80.

Lectures on Pathology and Therapeutics, Special Medical. By Professor FRANCESCO ORSI, University of Pavia. 2 vols. Pp. 552 and 583.

THE lively professor of anthropology, Paolo Mantegazza, in one of his scientific disquisitions, stated that this century was that of reviews. As potent causes produce corresponding effects, the great multiplicity of authors, and their labours, literary, physiological, pathological, and practical, have created such an amount of pabulum for the critics that the name of the latter has become legion. It has been alleged that one of the best methods of thoroughly mastering the contents of a book is to carefully peruse it with the purpose of giving an honest and comprehensive account of it. With such intentions we have devoted a good many spare hours to the study of the lectures of Professor F. Orsi, delivered during the sessions of 1874–75 and 1875–76, printed from notes taken by three of his students, and revised by their preceptor.

In some preliminary observations he states that the department of instruction entrusted to him is *dicotomous*, having one branch entirely doctrinal, expositive, cathedratical; another applied, technical, practical—one involving the scientific exposition of this system of knowledge, the other the means of bringing the theory to bear on the actualities of the object itself,—the end of both being the welfare of humanity. In classifying the order of his enterprise the professor gives his reasons for preferring the anatomical method of arrangement, following thereby the principles instituted in Italy in 1858—previous to that introduced by Niemeyer—by his honoured master, Professor Pignacca.¹ This classification embraces nine classes. —(1.) the maladies of the uropoietic apparatus; (2.) those of the reproductive organs; (3.) the digestive; (4.) of the respiratory; (5.) the circulation; (6.) the locomotor; (7.) the nervous; (8.) the cutaneous; and (9.) maladies of multiple seat and constitutional. In each of these divisions a treatise, full, succinct, yet comprehensive, is given, evincing a complete command of the latest and most exact information attainable on the subject. The picture he draws of each malady is evidently made out of ample and familiar acquaintance with the varying phases of the disease, and the limpid clearness of style shows that Italian fully rivals French, which boasts that "tout ce que n'est pas clair, n'est pas Français."

The author sticks very closely to his own department, carefully seeking to avoid as far as possible overlapping that of his colleagues. Hence the histological details so frequent in works of this kind in English are nearly, though not entirely, absent, the students being referred to what they will receive or are receiving from the professor of histology; while in surgery and dermatology the same plan is pursued, perhaps too strictly, as, for example, in ovarian dropsy, after expounding the futility of medical treatment, he speaks of the palliative and radical surgical procedure, *nell' asportazione del cavo addominale della cistide*, without making the slightest reference to the revolution effected by the labours of Spencer Wells, Thomas Keith, and their followers.

In therapeutics Professor Orsi manifests an intimate acquaintance not only with the application, doses, best formula of all the munitions of the magazines of Materia Medica, from pilocarpine, aconitine, down to Holloway's pills, but also with some items peculiar to Italian practice, such as preparations of *yew* in internal hæmorrhages. Hints as to prices of medicines slip out as if unconsciously, indicating that, like some of the best practitioners among ourselves, Dr Orsi had begun his connexion with the healing art by a three years' apprenticeship behind the counter of some surgeon-apothecary.

The tone of the work is earnest and dignified, here and there relieved by scintillations of that *pawky*, quaint humour with which the readers of Italian classics, from Bocaccio to Manzoni, are familiar. The manner in which anatomical points are brought to bear on the elucidation of obscure symptoms reminds us somewhat of Hilton's *Rest and Pain.*

One rather amusing bit is the diagnostic of the Roman clinic by Professor Bacelli, discriminating the passage of the pleuritic effusion into empyema by attending to the different phonation of the word *tren-ta-tre* (33), the clearness and distinctness in the first, and the indistinctness and loss of the letters r, t, and n in the latter condition. Orsi holds with Descartes that a doubting frame of mind is the best preparation for the rational and satisfactory discussion of any novelty. He differs entirely from the general tone of the British and American medical press, which seems to accept anything that comes from Germany as oracular and quasi-infallible.

In the chapter on tuberculosis in general, after referring to certain authors as *unicist* with Bayle and Laennec, others as *dualist* with Graves, Reinhardt, Virchow, and Niemeyer, he concludes with, "In fact, saying that tubercle is a *neoplasia* (Virchow), or a *lymphangeitis* (Rindfleisch), or the product of a *specific inflammation* (various authors), or the effect of the emigration and deposit of *leucites* (Cohnheim), not only is the pathology of tubercle not cleared up, but old conceits newly dressed up are reproduced." How far his views might be modified by the recent discoveries of Koch we know not, but only remark that he is rather inclined to poke solemn fun at the multifarious expositions of bacteria, micrococci, etc., and the wondrous attributes bestowed on these by German pathologists. Notwithstanding the accusations that have been loudly made against Italian practice in the matter of *salasso* (venesection) in the cases of Count Cavour and Victor Emmanuel, it would seem that physicians there have gone through the cycle of abuse and disuse of this potent agency the same as in other countries. At the close of the treatise on typhoid fever we find it stated, "When students, we have seen some cases of typhoid fever to recover after having been *cured* with three to five blood-lettings (*salassi*), and from 50 to 100 leeches. And if this proves that beneficent nature is able even to rectify the aberrations of art, for our part we should always try to manage to do without similar auxiliaries."

While our Christison and Bennett, Simpson and Lister, are respectfully mentioned, we are struck by the paucity of reference to the lights of the London schools compared with the infinitely less numerous Dublin authorities. This we mention, as having frequently noticed the same thing in southern European medical literature.

We don't recommend the translation and publication in Britain of this really excellent book, but would invite, instead, all the younger members of the profession to qualify themselves to read it as given out by the Milan publisher. They must all of them have some Latin, and most now know some French. With very little trouble they, knowing these, might acquire as much of the "bella favella Toscana" as to enable themselves to learn at first hand the production of one of the most advanced and flourishing schools of European science and medical progress.

A Practical Treatise on the Diseases of Children. By J. FORSYTH MEIGS, M.D., and WILLIAM PEPPER, M.D. 7th Edition. London: H. K. Lewis.

IT is just thirty-three years since the first edition of this work was issued from the press, the one now before us being the seventh—in itself a criterion of its excellence, and of the high place it holds in the estimation of the profession. In this edition considerable alterations have been made upon that preceding it. A chapter of great interest and value is now given upon the subject of food for infants, where we find the advantages, or not, of artificial feeding, and the use of condensed milk, now so largely employed, especially considered. The chapters on pseudo-membranous laryngitis or croup and diphtheria are well worthy of perusal; and the subjects of cyanosis, pseudo-hypertrophic paralysis, infantile paralysis, or, as the author prefers to call it, poliomyelitis anterior, strike us as excellent and full of well-considered information, both pathological and therapeutical.

The section devoted to diseases of the skin has been remodelled and in many parts rewritten. The index is ample and full, enabling any one consulting the book to turn to the subject wished for with great readiness.

The work extends to over 1000 pages. The authors have given great care and attention to every part of it, resulting in the production of a text-book well worthy the attention of both seniors and juniors in the profession.

Throughout the book references are constantly being made to the work of others, so that further information, if desired, upon any of the subjects treated of can be readily obtained by observing these.

Scrofula and its Gland Diseases. By FREDERICK TREVES. London: Smith, Elder, & Co.: 1881.

MR TREVES gives a very good and full account of the pathology of scrofula, quite up to the investigations of the period at which the book was published. We cannot blame him for not describing discoveries which were more recently made. At the same time we think that some of his remarks would probably now be modified in the light of the bacterial connexion with tubercle that has lately been established.

In the second part of the book, which deals with scrofulous glands, we have most interest.

Mr Treves, in his treatment of this subject, leaves little to be desired. In one or two points we do not, however, altogether agree with him.

We do not think it safe to excise scrofulous glands in the outpatient room and allow the child to go home. Our opinion of excision is that it ought very seldom to be performed, and then only with the strictest antiseptic precautions.

In regard to early opening of suppurating glands, we do not agree with Mr Treves. Our experience of a small opening made early is, that there is a long course of suppuration. We consider that if the gland is allowed or encouraged to suppurate thoroughly

—in other words, if the gland becomes thoroughly destroyed and the skin over it quite thin—a free incision, with complete evacuation of the contents (more especially if performed antiseptically), will be followed by a quick and sound healing.

We are glad to see that Mr Treves maintains the importance of internal as well as local treatment. The disease is essentially a constitutional one, and requires constitutional treatment. We have seen plenty of enlarged glands in strumous children disappear under improved diet and tonic treatment if the glands are left alone.

On the whole, this is a valuable book, and worth reading. We would specially recommend it to surgeons.

Lectures on the Pathology and Treatment of Lateral and other Forms of Curvature of the Spine. By WILLIAM ADAMS, F.R.C.S. Second Edition. J. & A. Churchill: London: 1882.

MR ADAMS gives several reasons for having adopted this subject, not the least important of which is the desire to remove the treatment of curvature of the spine out of the hands of those empirical, book-advertising practitioners, who have some special system of treatment which they cry up as loudly as they decry all others. We wish Mr Adams success most heartily in this laudable endeavour.

In referring to orthopædic hospitals, Mr Adams says that they would come short of the end for which they are instituted, unless they are schools of instruction, not only to students, but also to the profession generally. We hope that this object will be carried out, and we consider that a general circulation throughout the profession of the work before us will greatly tend to this end.

In the first chapter, "On the Anatomy and Physiology of the Spinal Column," we regret to see no reference to the researches and observations of John Goodsir. The spine was one of Goodsir's hobbies, and he did a great deal to establish our present knowledge of its natural and acquired curvatures. In his second chapter Mr Adams combats the idea that curvatures are caused by muscular contraction or weakness in the same manner as in the distorted joints of limbs. He says, p. 26, "Joints with the minimum of motion are compared with joints possessing the maximum of motion, and merely because both sets of joints are liable in their flexions to produce deformities. The causes of deformity in both have also been assumed to be identical, because their motions are to a greater or less extent regulated by the muscles." Then at p. 45 he states, "It would appear that the functions of the spinal muscles are not to produce by active contraction any flexion or curvature of the spine, but essentially to regulate and limit its movements, and to restore its equilibrium when disturbed." Also at page 42 we read, "I have not been able to satisfy myself that lateral flexion of the spinal column, either as a healthy condition or as a morbid affection, is ever produced by active muscular contraction." The ordinary acquired or so-called natural curvatures are due, he thinks, to the thorax being weighted too heavily on the left side with the heart, etc., and lower down on the opposite side with the liver, thus causing the double curve so common in men. The dorsal curve (after Bühring) he calls "cardiac," the lumbar "hepatic."

Of lordosis in the lumbar region, as the curve occurs usually as the result of affections other than caries, or as a compensating curve in caries of the dorsal vertebræ, we are told in the third chapter that it cannot usually be benefited by mechanical treatment. When it is connected with caries such treatment is recommended. Lordosis in the dorsal region is usually compensatory, and, therefore, requires no special treatment. But in the cervical region it generally indicates caries of the cervical vertebræ. Antero-posterior curvature (cyphosis) may occur, apart from carious disease, on account of certain habits, muscular debility, chest affections, etc., and may be successfully treated by mechanical supports and muscular exercises.

In the fourth and remaining chapters Mr Adams treats of lateral curvatures, on which subject he puts forth his strength. He defines this affection as scoliosis, "A distortion of the spine, in which the bodies of the vertebræ deviate laterally in a horizontal direction, with or without a corresponding deviation of the apices of the spinous processes." Mr Adams retains the old name of lateral curvature as more distinctive than the more modern suggestions, such as serpentine, sigmoid, rotated, etc.

There is a distinction drawn between "weak spines" and real curvatures. This enables Mr Adams to eliminate muscular atony as a cause of curvature. At the same time he admits that "of these cases a certain proportion will terminate in the formation of lateral curvature, if this result be not prevented by proper treatment."

The division into single and double curves is retained, though care is taken to point out that single curves are an anatomical impossibility. We remember having this pointed out to us by Goodsir more than twenty years ago, as also many other points in regard to the normal and abnormal curvatures of the spine, which are looked upon in some quarters as novelties.

The prominence on the one side of the curved spine and depression on the other are caused by the rotation of the vertebræ, "the effect of which is to alter the positions of the transverse processes, causing them to project posteriorly on one side, *i.e.*, on the convexity of the curve, and to recede inwardly on the opposite side *i.e.*, on the concavity of the curve."

The anatomical explanation of the cause of deformity is "alterations in the relative thickness of the intervertebral cartilages and the bodies of the vertebræ at parts corresponding to the curvatures," and "these deviations are associated with changes of direction in the articular facets of the oblique articulating processes." "This deviation of the bodies of the vertebræ does not necessarily correspond to, nor is it indicated by, any lateral deviation of the apices of the spinous processes." These latter may be almost straight while there is a considerable curvature present. The importance of these anatomical facts are strongly dwelt upon by Mr Adams.

The immediate cause of these changes in the anatomical relations of the different parts of the spinal column is atrophy, taking place "simultaneously in the intervertebral cartilages, and at the articulations formed by the oblique articulating processes," due to "absorption produced by the long-continued, irregular distribution of the superincumbent weight of the head, upper extremities, and thorax." The bodies of the vertebræ become compressed and wedge-shaped in the later stages of the deformity, but do not present any pathological change as regards their structure.

The effect of spinal curvature on the capacity of the thorax is to diminish it especially on the side to which the convexity of the curve is turned.

In Chapter VII. Mr Adams enumerates the various theories advanced in explanation of the rotation of the vertebræ that occurs in curvature. The one which he prefers is that ascribed to Mr A. Shaw, which is, that when the body is inclined to one side, weight is thrown on the articular processes of that side, and if "this faulty position be long continued they gradually become altered in form." The articulating processes being situated posterior to the bodies of the vertebræ, this causes the bodies to rotate towards the side at which the alteration in form from pressure takes place.

In Chapter IX. Mr Adams takes up the question of diagnosis. He says, "The only certain and reliable indication of the existence of lateral curvature of the spine in the dorsal region is a prominence posteriorly of the angles of the ribs on one side, and a corresponding depression of the angles of the ribs on the other side; and in the lumbar region a prominence posteriorly of the apices of the transverse processes on one side, and a corresponding depression of the transverse processes on the other side."

Treatment, in the author's opinion, must be both local and constitutional, especially in the case of young persons. The constitutional conditions which must be met are general debility and a possible consumptive tendency. For these the hypophosphites, iron, cod-liver oil, fresh air, etc., are advisable.

The local means recommended are, recumbency, certain appropriate muscular exercises, and mechanical appliances suitably adapted.

Mr Adams's apparatus, described as the *rotation-plate instrument*, is described at page 267. It consists of a pelvic belt, crutches, and "one or two lateral steel plates," which are "attached to separate levers," and "made to move in separate directions for the purpose of accurate adaptation."

We have thus tried to give our readers an idea of the contents of this most interesting and valuable work. And, after quoting the above extracts, it is almost unnecessary to add that the book is well worthy a place in every practical surgeon's library.

Antiseptic Surgery. By W. WATSON CHEYNE, M.B., F.R.C.S., etc. London: Smith, Elder, & Co.: 1882.

WE have much pleasure in noticing Mr Cheyne's work on antiseptic surgery. It is a monument of laborious research and investigation, and, though somewhat spun out (nearly 600 pages), is written in so easy and interesting a style as to be by no means laborious reading.

There are one or two points worth alluding to here,—notably that Mr Cheyne—acting, we believe, as the mouthpiece of Mr Lister—almost throws over the spray. The spray has always been the greatest difficulty and trouble in Listerian surgery, and we are told that it may go by the board provided everything else is retained.

From a careful study of all the proceedings mentioned here as necessary for the proper performance of antiseptic surgery, we find that the really important things are the minutiæ—the washing of hands and instruments, the cleansing of sponges, etc., etc. Of the truth of this we are certain; for we have over and over again seen operation cases go wrong where the only traceable cause was an absence of proper precautions to prevent germ-laden fingers entering the wound. Germs that settle from the air may be easily washed away, but those carried by the fingers or instruments are shoved into the inmost recesses of the wound.

In the present day, and in the city where antiseptic surgery became really famous, it is unnecessary for us to say that antiseptic surgery is a success. But it, unfortunately, is necessary that we should draw attention to the fact, on which we are glad to see Mr Cheyne lays important stress, that to practise antiseptic, or rather aseptic, surgery successfully it is most important to pay special attention to the minutiæ.

One thing is evident throughout the whole book, and that is, that Mr Cheyne worships Mr Lister, and considers that nothing can be good that has not received Mr Lister's approval—in a word, is "Listerian." This is the only fault of the book we have seen, and is an unfortunate one, as it introduces an element of narrow-mindedness and illiberality. Notwithstanding this objection, we have no hesitation in recommending Mr Cheyne's work to all who wish to acquire a proper knowledge of antiseptic and aseptic surgery.

The Pharmacopœia of the London Hospital; compiled under the Direction of a Committee appointed by the London Hospital Medical Council. London: J. & A. Churchill: 1882.

THIS committee has done its work admirably. The Pharmacopœia is carefully compiled, and the modes of preparation, in many cases, superior to those contained in the *British Pharmacopœia.* A great improvement in the preparation of ointments has been adopted in substituting the products of petroleum for lard and suet, which are the bases of the ointments of the *British Pharmacopœia.* The book, in a valuable appendix, gives instructions for case-taking in the medical wards, and for estimating sugar and urea in urine, and mentions the chief poisons and their antidotes.

On the Flora of the Kurum Valley, etc., Afghanistan. By J. E. T. AITCHISON, F.L.S., Surgeon-Major H.M. Bengal Army. Extracted from the *Linnæan Society's Journal:* Botany, vol. xviii., and part ii., vol. xx.

TO those who know Surgeon-Major Aitchison no evidence of his indomitable spirit and unflagging industry will be a surprise. He accompanied General (now Sir Frederick) Roberts, V.C., as medical officer in charge of the 29th P. Regt., N.I., was present at the taking of the Pewar-Kotâl and the further advance to the Shutergardan. On peace being subsequently proclaimed, after the first part of the Afghan campaign, he was appointed on *special duty* as botanist with the Kurum field force. He carried out his investigations into the flora of the Kurum Valley at great personal risk, his collections being made at long distances from British encampments, where his movements were not unfrequently watched by Afghans ready to pick up anything they looked upon as *loot,* or help themselves to a safe future by the disposal of a British officer. He, however, gained the sympathies of many of the marauders by frequently attending on their sick in distant villages, and created a *furor* in his favour from successfully operating on two adults with hare-lip.

When the advance to Kabul took place, after the massacre of the late Sir Louis Cavagnari, Dr Aitchison returned with his first collections to India, and thence to Kew, where he remained for three months, and returned to India in the spring of 1880; thence again to Kurum on special duty as botanist. On the withdrawal of all of our troops from Afghanistan Dr Aitchison again returned to Kew early in 1881, and worked for four months, being on duty during that period,

The general results of his work are given in two papers in the above journal.

In addition to the specimens of his collections kept at Kew, duplicates have been distributed to the following herbaria:—Seharanpore, Calcutta, St Petersburg, Harvard University, Prof. Boissier, British Museum, Florence, Paris, Berlin, Copenhagen, Lisbon, Stockholm, Mons. Corsan, Edinburgh, Zurich, Mons. Crepin. They contained over 1000 species, in which 1 genus and 70 species were new to science. 30 new species have been figured, and a most valuable map with original sections of the country traversed attached to his second paper.

He brought home 15,000 specimens of 950 species—some new ones, now dignified by the names of *Robertsonia* (fancy the fighting general giving his name to a clematis; *Aitchisonia rosea* is another most appropriate piece of nomenclature). Men like him, with the *perfervidum ingenium Scotorum*, are those who advance science and often get little credit for it.

Part Third.

MEETINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF EDINBURGH.

SESSION XLI.—MEETING XII.

Wednesday, 19*th July* 1882.—Professor SIMPSON, *President, in the Chair.*

I. *Dr Milne Chapman* showed—(1.) A CANCEROUS ULCER which he had lately removed from the vulva of a patient aged 72. It occupied the cleft between the small and the great labium on the left side, and involved part of the prepuce of the clitoris. There was one suspiciously enlarged gland in the groin, but after consultation with Dr Thomas Keith the ulcerated surface was removed, and the gland left alone. The thermo-cautery knife was used, several long needles having been first passed deeply beneath all the hardened tissues so as to form a guide for the incision. About half an inch of the clitoris was removed, and there was here some trouble from bleeding, which was controlled by the application of several catgut ligatures. On the opposite buttock, about the level of the anus, there was a small, circular, parchment-like portion of skin, about one-eighth of an inch in diameter, which was also removed, and which, on subsequent microscopic examination, proved to be malignant. The wounds healed slowly and completely, and the enlarged gland disappeared. (2.) An INTRA-UTERINE POLYPUS which he had that day removed from a patient of Dr Bennet of Leith. There had been frequent bleedings for five years previously. Scissors were used to divide the neck of the growth, and there was no hæmorrhage.

II. *Dr J. Halliday Croom* showed a PATIENT with atresia vaginæ formed by a thick hymen. There had been retention of menses. The menstrual fluid escaped, *not* through any opening in the hymen, in which there was absolutely no aperture, but through an *opening* in the *urethra*. Dr Croom invited Fellows to examine patient. She was the subject of a communication.

III. *Dr Barbour* read his communication on THE DIAGNOSIS OF ADVANCED EXTRA-UTERINE GESTATION, WITH FROZEN SECTION. The paper appears at page 220 of this Journal.

IV. *Dr C. H. Thatcher* read his communication on A CASE OF EXTRA-UTERINE (TUBAL) PREGNANCY, which appears at page 300 of this Journal.

The President said that the Society might congratulate itself on having recorded in its Transactions two cases so interesting and well observed. On a former occasion he had stated his experiences with regard to extra-uterine gestation, and no other case had come under his notice till this one, in which Dr Barbour had correctly stated the difficulty in diagnosis. The retro-uterine tumour contained a substance which was firm, with the exception of the collection of blood found afterwards to have been in the pouch of Douglas. With regard to treatment, the preparation showed that active interference would not have been successful; the patient must necessarily have sustained a loss of blood which would have proved fatal. The chief interest of the preparation was pathological. In Dr Thatcher's case the presence of a corpus luteum in the ovary of the opposite side was important; this fact proved that migration of the ovum had taken place. Kussmaul had shown by observation on gestation in an isolated horn, that external migration did occur. Tyler Smith's theory of internal migration was perfectly gratuitous.

Dr Croom remarked on the two cases as good types of extra-uterine gestation. Dr Barbour had clearly stated the difficulty of diagnosis from hæmatocele and retroflexion of the gravid uterus; the displacement of the bladder was an interesting feature in the case. The case might have been one of ovarian gestation, which would explain the presence of muscular fibre in the sac wall. The thanks of the Society were due to Dr Barbour for having thus reported an unusual form of extra-uterine gestation not yet brought under its notice, and to Dr Thatcher for his description of a typical tubal gestation.

Dr Hart thought the great value of Dr Barbour's case consisted in the beautiful preparation. There was no good drawing from nature of an extra-uterine gestation, in the pouch of Douglas, *in situ*. The only other preparation was one by Barnes, in which the details were not given. The removal of the bony pelvis should be carried out whenever it is possible. The presence of the bony structures enhanced the value of a preparation, as they kept the parts *in situ*, and showed the exact anatomical relations. The preparation also showed that it was much more difficult to tell the real nature of the gestation than was generally admitted in the text-books. As to the displacement of the bladder, an exact nomenclature must be used; the bladder was *displaced* upwards in this case, not drawn upwards as in parturition. Dr Thatcher's paper contained a valuable statement of the typical clinical facts in a case of tubal gestation.

Dr Peter Young considered that the great value of Dr Barbour's preparation was, that the parts in the pelvis were undisturbed. From the development of the fœtus it was evident that it had grown in a larger space than could be afforded by the dilated Fallopian tube. The extravasation of blood into the placenta might have caused the death of the fœtus. The fœtus was apparently four months old.

Dr Chapman referred to the expectant treatment of cases of abdominal gestation, as recommended by Litzmann; it gave the mother a better chance if we delayed operation till the fœtus was atrophied, and the placental circulation had time to become completely abolished by thrombosis.

V. *Dr J. Halliday Croom* read his paper on TWO CASES OF ATRESIA VAGINÆ.

The President thanked Dr Croom for his interesting report of these cases; the spontaneous evacuation of the menstrual fluid per urethram was of special interest. In a case recently operated upon by himself it was the cervix and upper third of the vagina which were expanded. The body of the uterus was felt as a firm nodule on the cystic tumour. Perhaps in Dr Croom's case we might thus explain the small size of the uterus after evacuation of the fluid; in dilatation of the uterus due to atresia there is not hypertrophy of the walls of the uterus as in pregnancy, and, therefore, we should not expect the uterus to be of large size after evacuation. As to treatment he had in his last case opened the cyst under the spray, and injected into the cavity carbolized water which washed out all the contents; the risk of septicæmia was thus reduced to a minimum. He had great difficulty in keeping the new canal open. Perhaps the second obstruction, in Dr Croom's case, was due to contraction in the wall of the sac.

Dr Barbour referred to Dohrn's explanation that atresia of the vagina just within the hymen was due to approximation of the walls at this point during the eighteenth week of fœtal life; the slow escape of the fluid on Dr Croom's incising the hymen might point to the existence of congenital atresia of the vagina as well as atresia of the hymen. It was rare to have both conditions present.

Dr Peter Young referred to Beigel's description of a case in which the vagina was represented by a threadlike duct; this might throw light on one of Dr Croom's cases.

1882.

ADDRESS TO STUDENTS OF MEDICINE.

WE are proud, and with good reason, of our profession, and are always animated with a strong desire, at the commencement of each winter session, to say a few kind words to the scores of young men who are either commencing or about to renew their studies. None of them, we presume, are absolutely ignorant of its history, and the names of its heroes are familiar as household words; but those only whose surroundings have been peculiarly favourable are truly fired, as we would like them to be, with a high estimate of the healing art and with enthusiasm as to their own personal relations to it in the years to come. It is perhaps unreasonable to expect that it should be otherwise; and, for the present at least, they must take it as the opinion of their teachers and of those who have spent a lifetime in its service, that the noble craft to which they look forward is worthy of their warmest devotion. Let all our students start with this conviction, and it will both lighten their necessary toil and illumine those solitary hours which might otherwise seem dark enough.

We shall offer a few hints fitted to turn this opinion, which can at present be accepted only on trust, into a conviction founded on personal experience. It will be a pleasant variety, in the intervals of severer occupation, to read the biographies of those who have signalized themselves as surgeons or physicians. There are many such works. We may mention the life of Mr William Hey of Leeds, of Sir Astley Cooper, of Percival Pott, and the life and correspondence of Sir Charles Bell, as pleasant and useful reading, well adapted as introductory to a fuller and more leisurely study of the same kind at a later period. A good deal of professional history—embracing the progress of discovery and the perfecting of our art—will be picked up incidentally in your various classes; but we do not recommend such special study at present. It would not be understood, and would only load and confuse the mind. A small work, entitled *The Gold-headed Cane*, written by a distinguished member of the profession, and quite a gem in a literary point of view, would pleasantly supplement the biographies already mentioned.

Another suggestion may be made. Look forward to the day when, having gone through your whole *curriculum* in an earnest, conscientious manner, and having received your diploma or degree, you are ready to undertake the practice of your profession with all its responsibilities. Think what a great privilege is yours. You are at liberty to minister to the bodily necessities of the sick, the wounded, the infirm, to relieve the anxieties not only of the sufferers under your care, but of all who take an interest in them—their parents, their wives, their brothers and sisters. Your laborious studies, your duties in the dissecting-room—repulsive, possibly, at first—your self-denying attendance at the dispensary and in the hovels of the destitute, your kindness to those whom untaught and unskilled philanthropy could not reach,—all these things are now within sight of a sure reward. We do not speak of pecuniary acknowledgment—that may come in good time; but we are pointing at the bright satisfaction of having now the power to confer benefits on your fellow-creatures, poor as well as rich, which are paramount to all other benefits, and which you and your brethren in the profession are alone capable of doing. How often is the surgeon or physician justly looked to as the supreme arbiter in the hour of alarming sickness or injury—an hour which may come to the highest in rank and influence as suddenly as to the humblest and most obscure! Every eye is turned to the doctor, as certainly as to the pilot who has just stepped on deck and put his hand on the tiller when the vessel is in jeopardy on a lee shore. You see, then, that your profession is an important one and can hardly be overrated. But the practice of it, if you have done your very best to master it, holds out to you sources of inward satisfaction of which no man can deprive you, when your efforts are made with benevolent thought and with an abiding desire to please Him whose eye is upon you, and who has enabled you to acquire and put forth your skill, such as it is. Often, it is true, the result of your endeavours to cure or relieve may prove unsuccessful; but this will only stimulate you to search honestly and earnestly for shortcomings in your procedure, and to study and observe with renewed diligence, that you may be able to deal more successfully with future emergencies of a similar kind.

The longer you practise this noble profession, and the more accurately you ascertain its past history, you will rejoice in its progress, and hail the discoveries and inventions which are widening its power. But we would advise you, until you have passed your examinations, to aim chiefly at mastering the ascertained knowledge and the practical details propounded by your teachers. The domain already subdued is more than large enough for your present purpose; and in hankering after doubtful novelties you are almost sure to neglect and lose hold of essential truths and important facts. Instead, therefore, of reading the periodical literature of the profession, you should seek, as you have time and opportunity, to peruse some of those valuable monographs which, like landmarks on the road, mark the way leading up to our present position. The best of these will doubtless be referred to by your teachers, and, if heartily perused, cannot fail to deepen and consolidate the foundations of your knowledge.

We are trying to magnify the claims of the honourable profession which you have chosen. May we not suggest that no other earthly calling, not even the clerical, approaches so closely in character to the daily, hourly employment, during His earthly life, of Him who emphatically went about continually doing good? Read carefully the accounts given in the Gospels of the *manner* in which the Saviour of men performed His miracles of healing, and you will find, particularly in the graphic narratives of Mark and Luke, many indications of tenderness and sympathy which may be imitated in your future intercourse with the sick, the suffering, and the anxious. His miracles of divine power did not preclude Him from these manifestations of human compassion and fellow-feeling. Your ministrations will sometimes, in these days of advanced medical and surgical science, wear an aspect bordering on the miraculous to untrained observers and recipients; and at any rate there is no restriction in the opportunities presented to you of imitating the sympathetic *manner* in which the blessings of restored health and strength were bestowed by Him who is, or ought to be, our example in all things. We need only hint at the higher privilege which the medical man possesses—if his convictions lead him that way—of ministering, as occasions offer, to the spiritual necessities of his patients. Who can speak from such a "coign of vantage" to the ignorant and depressed as the man who has ministered effectually to their bodily ailments, and, in so doing, gained their confidence and goodwill? Let all such endeavours, however, be characterized by humility, unobtrusiveness, and a sense of personal unworthiness.

If we have at all succeeded in impressing our young readers with the nobleness of their future profession, we may hopefully add one or two pieces of advice in regard to their mode of preparing for it. Lay the foundations with great assiduity and carefulness. These may be regarded, in your first year, as Anatomy and Chemistry. Do your very best while engaged with them, and beware, above all things, of relegating them to future opportunities. Let the work of one season be accomplished as thoroughly as possible; for each succeeding season will have its own peculiar demands and duties; and if any are postponed unnecessarily, there will be an overwhelming accumulation in the end, which will land you in all the discomfort and worry of the unprofitable system of *cramming*, which, even if temporarily successful, demoralizes the mind and incapacitates it for regular and honest work in time to come. Our last advice regards your bodily health. Be regular in your meals and your time for repose; go to bed and get up by times; sponge yourself with cold water, and rub with a coarse towel till you are in a glow, when you get up in the morning; allow some time to quiet thought before breakfast, which should be early enough to be taken leisurely, and to admit of the day's work being entered on without risk of disturbing your digestion. Regular exercise of some active kind is indispensable, unless your distance from classes is so great, both going and coming, as to secure a considerable walk. Health is so important that it is a great blunder to imperil it even by excessive devotion to study.

INFORMATION REGARDING MEDICAL EDUCATION AND EXAMINATIONS.

THE following are the Regulations of the General Medical Council for the Registration of Medical Students:—

EXTRACT FROM MINUTE OF MEETING OF GENERAL MEDICAL COUNCIL OF JULY 14, 1880.—Moved by Mr Turner, seconded by Sir James Paget, and agreed to:—"That the General Council's amended *Recommendations on Education and Examination* be communicated to the several Examining Boards whose Examinations are recognised by the Council; that their attention be drawn to the changes which have been made; that they be informed that the Council proposes that the additional requirements be not made obligatory on students till January 1, 1882; and that, on and after that date no person be allowed to be registered as a Medical Student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:—1. English Language, including Grammar and Composition;[1] 2. English History; 3. Modern Geography; 4. Latin, including Translation from the original, and Grammar; 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof; 6. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;[2] 7. One of the following optional subjects:—(1) Greek; (2) French; (3) German; [(4) Italian; (5) any other Modern Language; (6) Logic; (7) Botany; (8) Elementary Chemistry.]"[3]

The following Testimonials of having passed the Preliminary Examination in General Education are accepted by the College, in terms of the recommendations of the General Medical Council:—

(1.) UNIVERSITIES OF THE UNITED KINGDOM.

Oxford.—Examination for a Degree in Arts. Responsions, Moderations, Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics; and also one of the following optional subjects:—Greek; French; German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

Cambridge.—Examination for a Degree in Arts. Previous Examination. Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. Higher Local Examinations.

Durham.—Examination for a Degree in Arts. Examination for Students in their second and first years. Registration Examination for Medical Students.

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[1] The General Medical Council will not consider any Examination in English sufficient that does not fully test the ability of the candidate—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

[2] This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

[3] The Preliminary Examinations for the License of the Royal College of Surgeons do not include the subjects between brackets, but if they have been passed at any of the Examinations recognised by the General Medical Council, they will be accepted as optional subjects in conformity with the above Regulations.

Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects:—Greek; French; German; Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

Oxford and Cambridge Schools' Examination Board.—Certificate to include English Language, including Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, First two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects:—Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

London.—Examination for a Degree in Arts. Preliminary Scientific (M.B.) Examination. Matriculation Examination.

Aberdeen, Edinburgh, Glasgow, and St Andrews.—Examination for a Degree in Arts. Preliminary Examination for Graduation in Medicine or Surgery.

Edinburgh, Aberdeen, and St Andrews.—Examination of (Senior) Candidates or Honorary Certificates under the Local Examinations of these Universities.

Dublin.—Examination for a Degree in Arts. Entrance Examination.

Queen's University (Ireland).—Examination for a Degree in Arts. Entrance Examination. Examination for the Diploma of Licentiate in Arts. Previous Examination for B.A. Degree. Local Examinations, including all the subjects required.

Edinburgh.—Entrance Examination for a Three Years' Course in Arts.

(2.) OTHER BODIES NAMED IN SCHEDULE (A) TO THE MEDICAL ACT.

Royal College of Surgeons of England.—Examination conducted under the Superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.

The Society of Apothecaries of London.—Examination in Arts.

Royal Colleges of Physicians and Surgeons, Edinburgh.—Preliminary Examination in General Education, conducted by a Board appointed by these two Colleges combined.

Faculty of Physicians and Surgeons of Glasgow.—Preliminary Examination in General Literature.

Royal College of Surgeons in Ireland.—Preliminary Examination, Certificate to include all the subjects required.

Apothecaries' Hall of Ireland.—Preliminary Examination in General Education.

(3.) EXAMINING BODIES IN THE UNITED KINGDOM NOT INCLUDED IN SCHEDULE (A) TO THE MEDICAL ACT.

Royal College of Preceptors.—Examination for a First Class Certificate.

Intermediate Education Board of Ireland; Junior, Middle, and Senior Grades.—Certificate to include all the subjects required by the General Medical Council.

The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil.—Certificate to include all the subjects required by the General Medical Council.

(4.) INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

Universities of Calcutta, Madras, and Bombay.—Entrance Examination, Certificate to include Latin.

M'Gill College, and Bishop's College, Montreal.—Matriculation Examination.

University of Toronto, Trinity College, Toronto, Queen's College, Kingston, and Victoria College, Upper Canada.—Matriculation Examination.

King's College, Nova Scotia.—Matriculation Examination. Responsions.

Medical College, Halifax, Nova Scotia.—Matriculation Examination.

University of Fredericton, New Brunswick.—Matriculation Examination.

University of Melbourne.—Matriculation Examination, Certificate to include all the subjects required by the General Medical Council.

University of Sydney.—Matriculation Examination.

University of the Cape of Good Hope.—Matriculation Examination.

University of Adelaide.—Matriculation Examination. Primary Examination.

Codrington College, Barbadoes.—1. English Certificate for Students of two years' standing, specifying the subjects of Examination. 2. Latin Certificate, or "Testamur."

Tasmanian Council of Education.—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

Christ's College, Canterbury, New Zealand.—Voluntary Examinations. Certificate to include all the subjects required by the General Medical Council.

South Australia.—South Australian Institute, Adelaide.—Preliminary General Examination: First Class Certificate.

University of Otago, New Zealand.—Matriculation Examination.

Ceylon Medical College.—Preliminary Examination.

Michigan College of Medicine.—Matriculation Examination.

Germany and other Continental Countries.—Gymnasial Abiturientien Examination, and Corresponding Certificate from other Foreign Universities.

Gymnasia of the Circuit of Dorpat.—Examination of Maturity.

REGISTRATION OF MEDICAL STUDENTS.

1. No Medical Student shall be registered until he has passed a Preliminary Examination, as required by the General Medical Council, and has produced evidence that he has commenced Medical Study.

2. The commencement of the course of Professional Study recognised by any of the Qualifying Bodies shall not be reckoned as dating earlier than fifteen days before the date of Registration.

3. The Registration of Medical Students shall be placed under the charge of the Branch Registrars.

4. Every person desirous of being registered as a Medical Student shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a Form which may be had on application to the several Qualifying Bodies, Medical Schools, and Hospitals; and shall produce or forward to the Branch Registrar a Certificate of his having passed a Preliminary Examination, as required by the General Medical Council, and evidence that he has commenced Medical Study.

The following pages contain a tabular abstract of the regulations of the various Licensing Boards, as well as a list of the Hospitals, Dispensaries, etc., attached to our Scotch Medical Schools; also the regulations for the Army, Indian, and Navy Medical Services. The space at our disposal does not allow of more detailed information. But, in point of fact, the regulations of all Licensing Boards now correspond much more closely than they used to do, and the regulations of the General Medical Council afford a key to the general requirements of all of them. For special information, application should always be made to the Secretaries of the Licensing Boards; or, in the case of the Universities, recourse may be had to the published Calendars.

The *Preliminary Examinations* are usually held before the commencement, and at the end, of the Winter Session,—viz., in October, March, or April—sometimes also at the end of the Summer Session. The Professional Examinations in Universities are usually after the Winter and during the Summer Sessions; in Edinburgh, however, the first Professional is held in October as well as April. The other Licensing Boards' examinations are held at various periods throughout the year. Special examinations, under circumstances of urgency, can be held at almost any time; but they, of course, entail considerable addition to the expense.

COURSE OF STUDY REQUIRED BY THE VARIOUS BOARDS OF THE UNITED KINGDOM.

	Age.	Anatomy.	Dissections.	Chemistry.	Practical Chemistry.	Materia Medica.	Physiology or Institutes of Medicine.	Surgery.	Practice of Medicine.	Midwifery.	Medical Jurisprudence.	Pathology or Morbid Anatomy.	Botany.	Natural History.	Practical Pharmacy.	Clinical Surgery.	Clinical Medicine.	Hospital Attendance.	Practical Midwifery.	Dispensary or Out-door Practice.	Vaccination.
	Years.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	Mons.	
Edinburgh University, M.B. & C.M., . .	21	6	6	6	8	6	6	6	6	6	8	6	8	8	8	6	6	24	8 mo., or 6 cas.	6	
University of Glasgow, M.B. & C.M., . .	21	6	6	6	8	6	6	6	6	6	8	6	8	8	8	6	6	24	do.	6	
University of Aberdeen, M.B. & C.M., .	21	6	6	6	8	6	6	6	6	6	8		8	8	8	6	6	24	do.	6	
University of St Andrews, M.B. & C.M., .	21	6	6	6	8	6	6	6	6	6	8	6	8	8	8	6	6	24	do.	6	
London University, M.B., ...	21	6	12	6	1 crs.	1 crs.	6	6	6	1 crs.	1 crs.	1 crs.			1 crs.	2 yrs.	2 yrs.	4 yrs.	20 cas.	6	
University of Durham, M.B. & M.D., . .	21																				
Dublin University, M.B., ...		6	6	6	8	8	8	6	6	6	8		8				9	24	6 mo.		
" " Surgical Diploma, .		12	18	6	8	6	18	12	6	6	8		8			27	27	27			
The Queen's University of Ireland, M.D.,		12	12	6	8	6	12	6	6	6	8		8	8	8 mos.	12	12	24	3 mo.		
Royal College of Physicians, London, .	21	12	12	6	8	8	12	6	12	8	8	6	8		8		9	24	20 cas.		
Royal College of Physicians, Edinburgh,	21	6	6	6	8	8	6	6	6	8	8	8	8		8	8	6	24	6cases		
King and Queen's Col. of Phys. Ireland, .	21	6	12	6	6	6	6	6	6	6	6		6			6	21	27	6 mo.		
Royal College of Surgeons, London,* . .	21	12	12	6		8	12*	12	6	8					8	27*	9*	33			Cert.
Royal College of Surgeons, Dublin, . .	21	18	18	6	6	8	18	18	6	8	8					18	9	27			
Royal College of Surgeons, Edinburgh, .	21	12	12	6	8	8	8	6 or 12	6	8	8	8			8	6 or 12	6	24	6 cas.	6	Cert.
Faculty of Phys. and Surgeons, Glasgow,	21	12	12	6	8	8	8	6 or 12	6	8	8				8	6 or 12	6	24	6 cas.		
For Double Qualification by Royal Colleges Phys. and Surgs. of Edinburgh,	21	12	12	6	8	8	8	6 or 12	6 or 12	8	8	8			8	6 or 12	6 or 12	24	6 cas.	6	Cert.
For Double Qualification by Royal College Phys. Edinburgh, and Faculty of Physicians and Surgeons of Glasgow,	21	12	12	6	8	8	6	6 or 12	6	8	8	8			8	6 or 12	12	24	6 cas.		
Apothecaries' Hall, England, ...	21	12	6	6	8	8	6		12	8	8	6	8		Appr.		27	27	20 cas.		9 mo.
" " Ireland, ...	21	6	12	6	8	8	6	6	6	6	8		8		Appr.	9	18	27	20 cas.		

English Poor-Law Board.—Candidates for the appointment of Medical Officer are required to be registered under the Medical Act, and must be legally qualified to practise both Medicine and Surgery, in virtue of Diplomas or Licenses granted by competent legal authority in England, Scotland, or Ireland.

Information respecting exceptions to these regulations under various circumstances, and other details as to the order in which, according to some Licensing Bodies, the courses should be taken out, etc., must be obtained by consulting the published Charts of the Colleges, etc. Students should apply to the Secretary to each Board which they intend to pass for a detailed copy of its Regulations.

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* Students from the Schools of Scotland are admitted to examination at the Royal College of Surgeons of England, if they have followed the course of study required by the regulations of the Royal College of Surgeons of Edinburgh. Students in Scotland, therefore, are not required to attend more than one course of Physiology, six months Clinical Surgery, six months Clinical Medicine, and twenty-four months hospital.

MEDICAL SCHOOLS OF SCOTLAND, 1882-83.

WINTER SESSION.

Subjects.	University of Edinburgh.	School of Medicine, Edinburgh.	University of Glasgow.	Anderson's College, Glasgow.	Glasgow Royal Infirmary School of Medicine.	Western Medical School, Glasgow.	University of Aberdeen.	University of St Andrews.
Anatomy, Systematic and Practical, with Demonstrations.	Professor Turner.	Mr J. Symington and Mr Cathcart.†	Professor Cleland.	Dr A. M. Buchanan.	Mr H. E. Clark.	Mr Maylard.	Professor Struthers.	...
Physiology, or Institutes of Medicine.*	Professor Rutherford.	Dr James and Mr James Hunter.†	Professor M'Kendrick.	Dr Barlow.	Dr W. J. Fleming.	Dr Limont.	Professor Stirling.	Prof. Pettigrew.
Chemistry, and Practical and Analytical Chemistry.	Professor C. Brown.	Dr Macadam, Mr King, Mr I. Macadam, Dr Drinkwater, and Mr J. Y. Buchanan.†	Professor J. Ferguson.	Professor Dittmar.	Dr John Clark.	Mr Milne.	Professor Brazier.	Prof. Heddle.
Materia Medica and Therapeutics.	Professor Fraser.	Dr Moinet and Dr Wm. Craig.†	Professor Charteris.	Dr Morton.	Dr John Dougall.	Dr Carmichael.	Professor Davidson.	...
Practice of Medicine.	Professor Grainger Stewart.	Drs Wyllie, Affleck, and Bramwell.†	Professor Gairdner.	Dr S. Gemmell.	Dr J. W. Anderson.	Dr M'Vail.	Prof. Smith-Shand.	...
Surgery.	Professor Chiene.	Mr Duncan, Mr Miller, Dr C. W. Macgillivray.	Professor Macleod.	Dr Dunlop.	Dr W. Macewen.	Dr Knox.	Vacant.	...
Midwifery, etc.	Professor Simpson.	Drs H. Croom, C. Bell, P. Young, Ang. Macdonald, D. B. Hart.†	Professor Leishman.	In Summer.	In Summer.	Dr W. L. Reid.	Professor Stephenson.	...
Natural Philosophy.	Professor Tait.	...	Professor Sir Wm. Thomson.	Prof. Blyth.	...	...	Professor Niven.	Prof. Butler.
Natural History.	Professor Cossar Ewart.	Dr A. Wilson.	Professor Young.	...	...	...	Professor J. Nicholson.	Prof. Mackintosh.
General Pathology.	Professor Greenfield.	Dr B. C. Waller and Dr Buist.†	Dr Joseph Coats.	At Royal or Western Infirmary.	...	At Western Infirmary.	Professor Hamilton.	...
Clinical Medicine.	Professors Maclagan, G. Stewart, and T. R. Fraser.	Drs Muirhead, Brakenridge, and Wyllie.‡	Prof. M'Call Anderson & Physicians of Western Infirmary.	The Physicians of the Royal Infirmary.		Physicians of the Western Infirmary.	Drs Smith-Shand, Beveridge, and Fraser.	...
Clinical Surgery.	Professor Annandale.	Mr Joseph Bell.	Prof. George Buchanan & Surgeons of Western Infirmary.	The Surgeons of the Royal Infirmary.		Surgeons of the Western Infirmary.	Drs Ogston, O. Will, and Garden.	...

Lectures are given in Edinburgh during the Winter Session on the Diseases of the Ear by Dr Kirk Duncanson, on Diseases of the Eye by Dr John Robertson, and on Diseases of Children by Dr James Carmichael and Dr James Andrew.

Practical Physiology is taught by the respective professors during the Winter Session in Edinburgh and Aberdeen.

* This course is equivalent to that given under the name of General Anatomy and Physiology in the English Schools. Special schedules are issued by the London Boards for their Scotch students, which should always be inquired for.

† These are not conjoint courses, but separate ones by the gentlemen named.

‡ This is a joint course.

MEDICAL SCHOOLS OF SCOTLAND, 1883.

SUMMER SESSION.

SUBJECTS.	UNIVERSITY OF EDINBURGH.	SCHOOL OF MEDICINE, EDINBURGH.	UNIVERSITY OF GLASGOW.	ANDERSON'S COLLEGE, GLASGOW.	GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.	WESTERN MEDICAL SCHOOL, GLASGOW.	UNIVERSITY OF ABERDEEN.
Practical Anatomy and Demonstrations.	Professor Turner.	Mr J. Symington and Mr Cathcart.*	Professor Cleland.	Dr A. M. Buchanan.	Mr H. E. Clark.	Mr Maylard.	Professor Struthers.
Botany.	Professor Dickson.	...	Professor Bayley Balfour.	Prof. Wilson.	...	...	Professor J. W. H. Trail.
Materia Medica.	Professor Fraser.	Drs Moinet and Craig.*	Professor Charteris and Dr Napier.	Dr Morton.	...	Dr Carmichael.	Professor Davidson.
Midwifery, etc.	Professor Simpson.	Drs Keiller, Croom, Chas. Bell, P. Young, and Berry Hart *	...	Dr A. Wallace.	Dr James Stirton.	Dr W. L. Reid.	Prof. W. Stephenson.
Medical Jurisprudence.	Professor Maclagan.†	Dr Littlejohn.†	Professor Simpson.	Dr Alex. Lindsay.	Mr John Glaister.	Dr Eben. Duncan.	Professor Ogston.†
Comparative Anatomy.	Professor Turner.	Mr Cathcart.	...	...	...	...	Professor Nicholson.
Practical Physiology, including Histology.	Professor Rutherford.	Dr James and Mr James Hunter.*	Professor M'Kendrick.	Dr Barlow.	Dr W. J. Fleming.	Dr Limont.	Professor Stirling.
Practical Pathology, including Histology.	Professor Greenfield.	Dr B. C. Waller, and Dr Buist.*	Dr Joseph Coats.	Dr Newman, at Royal Infirmary.	Dr Newman.	At Western Infirmary.	Professor Hamilton.
Practical and Analytical Chemistry.	Professor Crum Brown.	Dr Macadam, Mr King, Mr I. Macadam, Dr Drinkwater, and Mr J. Y. Buchanan.*	Professor J. Ferguson.	Professor Dittmar.	Dr John Clark.	Mr Milne.	Professor Brazier.
Operative Surgery.	Professor Chiene.	Mr Duncan, Mr Miller, Dr C. W. Macgillivray.*	Professor Macleod.	Dr Dunlop.	Dr W. Macewen.	Dr Knox.	...
Pathology.	Professor Greenfield.	...	*Practical*—Dr T. Coats.	Dr Newman, at Royal Infirmary.	Dr Newman.	...	Professor Hamilton.
Mental Diseases.	Dr Clouston.	...	Dr Yellowlees.	...	Dr Alex. Robertson.	...	...
Natural History.	Professor Cossar Ewart.	Dr A. Wilson	Professor Young.	...	...	...	Professor Nicholson.
Clinical Medicine.	Professors G. Stewart, and T. R. Fraser.	Drs Muirhead, Brakenridge, and Wyllie.‡	Prof. M'Call Anderson and Physicians of W. Infirmary.	The Physicians of the Royal Infirmary.		Physicians of Western Infirmary.	Drs Smith-Shand, Beveridge, and Fraser.
Clinical Surgery.	Professor Annandale.	Mr Joseph Bell.	Prof. George Buchanan and Surgeons of W. Infirmary.	The Surgeons of the Royal Infirmary.		Surgeons of Western Infirmary.	Drs Ogston, O. Will, and Garden.

Operative Surgery is taught during the Summer in Edinburgh by Dr Duncan and Dr Miller, and in Glasgow by Professor Macleod and Dr Knox. Instruction in Vaccination is also given at the Royal Public Dispensary, Edinburgh, on Wednesdays and Saturdays at 12, both Summer and Winter, by Dr Husband; at the Faculty Hall, Glasgow, on Mondays at 12, by Dr Thomson; and at the Royal Infirmary, Glasgow, on Mondays and Thursdays at 12 o'clock, by Dr Tannahill, and Dr M'Vail, at Western Infirmary, on Mondays at 1 P.M. Medical Psychology and Insanity are taught in Summer by Dr Clouston and Dr J. B. Tuke in Edinburgh, and in Glasgow by Dr Yellowlees and Dr Robertson; Practical Medicine by Dr Byrom Bramwell in Edinburgh; the Diseases of Children by Drs Andrew and Carmichael; the Diseases of the Eye by Dr Argyll Robertson, Dr John Robertson, and Mr George Berry in Edinburgh, Professor A. Dyce Davidson in Aberdeen, and by Dr Thomas Reid, Mr Clark, and Dr Wolfe in Glasgow; the Diseases of the Ear by Dr Kirk Duncanson and Dr M'Bride in Edinburgh, and by Dr J. P. Cassells and Dr Johnstone Macfie in Glasgow; Diseases of the Skin by Dr Allan Jamieson in Edinburgh; and Dental Surgery by Dr J. C. Woodburn in Glasgow, and Mr Williamson in Aberdeen.

* These are not conjoint courses, but separate ones by the gentlemen named.

† Dr Ogston delivers his courses in Winter, but Practical Toxicology is taught by his Assistant in Summer. Dr Littlejohn gives courses during both the Winter and Summer Sessions. Dr Maclagan also lectures during both Summer and Winter. The Winter Course is chiefly intended for law students, but is open to medical students also.

‡ This is a joint course.

*** For additional Summer Courses on special subjects, see the Prospectus of each School.

LIST OF HOSPITALS, DISPENSARIES, ETC., IN CONNEXION WITH THE MEDICAL SCHOOLS OF SCOTLAND.

EDINBURGH.

ROYAL INFIRMARY, including **LOCK HOSPITAL**. Upwards of 560 Beds. Visits daily from 12 till 2 P.M. Physicians, Drs Maclagan, Grainger Stewart, Fraser, and Greenfield, Professors of Clinical Medicine; Professor Simpson and Dr Angus Macdonald (for Diseases of Women); Drs Claud Muirhead, D. J. Brakenridge, and John Wyllie, Clinical Lecturers. Assistant Physicians, Drs James O. Affleck, Andrew Smart, and Alex. James. Consulting Physicians, Dr D. R. Haldane; Dr Alex. Keiller (for Diseases of Women). Pathologist, * * * Surgeons—Professors Annandale and Chiene, Mr Joseph Bell, Drs John Duncan and A. G. Miller. Extra Surgeons, Dr P. H. Watson; Dr Thomas Keith (for Ovarian Diseases). Assistant Surgeons, Drs P. H. Maclaren and John Bishop. Consulting Surgeons, Dr Dunsmure and Dr Gillespie. Ophthalmic Surgeon, Dr Argyll Robertson. Assistant Ophthalmic Surgeon, Mr Berry. Dental Surgeon, Dr John Smith.

CONVALESCENT HOUSE, Corstorphine. Acting Surgeon, Dr Bishop.

CHALMERS HOSPITAL FOR THE SICK AND HURT. 24 Beds for medical and surgical patients. Physician, Dr Halliday Douglas. Surgeon, Dr P. H. Watson.

ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL. 30 Beds; from 200 to 300 in-patients and about 450 out-patients yearly. Consulting Physicians, Drs Moir and Graham Weir. Physicians, Dr Keiller, Professor Simpson, Drs Halliday Croom and Angus Macdonald. Consulting Surgeon, Dr Dunsmure. Secretary and Treasurer, J. Turnbull Smith, C.A.

ROYAL HOSPITAL FOR SICK CHILDREN. 80 Beds; average number of out-patients, about 6000. Consulting Physicians, Dr C. Wilson, Dr Graham Weir, and Dr Peel Ritchie. Consulting Surgeon, Professor Annandale. Pathologist, Dr G. L. Woodhead. Physicians, Drs J. Dunsmure, jun., J. Andrew, C. E. Underhill, and R. J. Blair Cunynghame. Extra Physicians, Drs Carmichael and Playfair. Surgeon-Dentist, Dr Smith. Ophthalmic Surgeon, Dr Argyll Robertson.

ROYAL PUBLIC DISPENSARY AND VACCINE INSTITUTION. About 12,000 patients annually. Consulting Physician, Dr Haldane. Medical Officers, Drs W. Husband, D. Wilson, Andrew, Moinet, Sinclair, Allan Jamieson, Cotterill, Waller, A. Husband, Spence, P. Young, Dyce Fraser, and A. Black. Consulting Physicians-Accoucheur, Drs Keiller and Charles Bell. Midwifery and Diseases of Women, Drs Andrew and Young. Diseases of the Skin, Dr A. Jamieson. Vaccination, Dr W. Husband. Apothecary, Mr John Nicol. Clinique daily at 3 P.M. Vaccination, Wednesday and Saturday, 12 noon. Midwifery and Diseases of Women, Tuesday and Friday, 1 P.M. Diseases of the Skin, Wednesday and Saturday, 1 P.M. Laboratory, 3 P.M. and 7 P.M. James Andrew, M.D., Secretary to the Medical Officers.

NEW TOWN DISPENSARY. About 10,000 patients annually. Medical Officers, Drs Cadell, Montgomerie Bell, Gibson, Wood, Caverhill, and Hay. Acting Physicians-Accoucheur, Drs Dunsmure, jun., and Underhill. Superintendent of Vaccination, Dr Affleck. Clinique daily at 2 P.M. Vaccination on Tuesdays and Fridays from 12 to 1.

ROYAL ASYLUM FOR THE INSANE. About 800 patients, 280 of whom are private patients. Physician, Dr Clouston.

EYE INFIRMARY, 6 Cambridge Street, Lothian Road. Surgeons, Benjamin Bell, Esq., F.R.C.S., and Joseph Bell, F.R.C.S. Assistant Surgeon, Dr J. Kirk Duncanson. Open daily at 1 P.M. Average number of patients annually, 1100.

Eye Dispensary, 54 Cockburn Street. About 2000 patients annually. Surgeons, Mr Walker, Dr Wilson, and Dr Argyll Robertson. Assistant Surgeon, Mr Berry. Open Mondays, Wednesdays, and Fridays, at 1 P.M. Clinical instruction during the summer session.

Ear Dispensary of Edinburgh, 17 Thistle Street. Drs T. Keith, Blair Cunynghame, and M'Bride. Open Tuesdays at 11.

Ear Dispensary, 6 Cambridge Street, Lothian Road. Surgeon, Dr J. Kirk Duncanson. Open Mondays and Thursdays, from 12 to 1 o'clock. Number of patients treated annually, upwards of 500.

Dental Hospital and School, 30 Chambers Street. Consulting Physician, Alexander Peddie, M.D., F.R.C.P.E. Consulting Surgeon, Joseph Bell, F.R.C.S.E. Consulting Dental Surgeon, John Smith. M.D., F.R.C.S.E. Dental Surgeons, Messrs C. Matthew, J. T. Cunningham, W. B. Macleod, M. Finlayson, A. Wilson, G. W. Watson, and M. Macgregor. Assistant Dental Surgeons, E. A. Cormack, W. Forrester, James Cooper, J. S. Durward, James Mackintosh, and James Lindsay. Mr W. Bowman Macleod, L.D.S., Edin., Dean and Hon. Treas. James Robertson, Solicitor, 4 Lindsay Place, Edinburgh, General Secretary. Daily, 9 to 10 A.M. Average number of patients, 4500 per annum.

GLASGOW.

Royal Infirmary. 532 Beds. Visit daily at 9 A.M. Dispensary Hour, 2 P.M. Physicians, Drs Maclaren, Scott Orr, Wood Smith, Perry, and Charteris. Surgeons, Drs Morton, Watson, Macewen, Dunlop, and Clark. Gynæcologist, Dr Stirton. Aural Surgeon, Dr Macfie. Dental Surgeon, Dr Woodburn. Dispensary Physicians, Drs Anderson and Dougall. Extra Dispensary Physicians, Drs Middleton, Henderson, Black, and Brock. Dispensary Surgeons, Dr Lothian and Dr Fleming. Extra Dispensary Surgeons, Drs Barlow, Adams, Muir, and Shaw. Pathologist, Dr Newman. Vaccinator, Robert Tannahill, M.D. M. Thomas, M.D., Superintendent.

Western Infirmary. This Hospital contains about 400 Beds for Medical and Surgical patients. There are Wards for Skin Diseases and Diseases of Women, and an out-door Midwifery department. Physicians, W. T. Gairdner, M.D., T. M'Call Anderson, M.D., James Finlayson, M.D., Gavin P. Tennent, M.D. Diseases of Women, W. Leishman, M.D. Surgeons, George H. B. Macleod, M.D., George Buchanan, M.D., A. Patterson, M.D., Hector C. Cameron, M.D. Out-door Physicians-Accoucheur, Robert Kirk, M.D., W. L. Reid, M.D., M. Cameron, M.D. Dispensary Physicians, Joseph Coats, M.D., D. C. M'Vail, M.B., S. Gemmel, M.D. Dispensary Surgeons, James G. Lyon, M.D., D. N. Knox, M.B., James Christie, M.D. Extra Dispensary Physician, William G. Dun, M.D. Extra Dispensary Surgeon, J. C. Renton, M.B. Pathologist, Joseph Coats, M.D. Pathological Chemist, John Lindsay Steven, M.B. Dispensary Surgeon for Diseases of the Ear, Thomas Barr, M.D. Dental Surgeon, James N. Brownlie, L.D.S. Medical Superintendent, John Alexander, M.D. Lady Superintendent, Miss E. Clyde. Secretary, Henry Johnston, 11 Bothwell Street. The hour of visit is 9 A.M. Operating days, Wednesday and Saturday. The Dispensary for out-patients is open daily at 2 P.M.

Lock Hospital, 41 Rottenrow Street. 80 Beds. Medical Officers, Drs James Dunlop and A. Patterson. P. Condra, Superintendent.

Lying-in Hospital and Dispensary. 36 Beds; in-patients, 273; out-patients, 974. Consulting Surgeon, Dr George Buchanan. Consulting Physician, Professor Leishman. Obstetric Physicians, Drs Samuel Sloan and Hugh Miller. Assistant Obstetric Physicians, Drs W. J. Brock and William Muir. Out-door Physicians, Drs J. Dunlop, J. Moir, T. F. Gilmour, A. Sloan, H. B. Wilson, and Malcolm Black.

GLASGOW ROYAL ASYLUM, GARTNAVEL. About 500 patients. Physician-Superintendent, Dr David Yellowlees. Lectures on Mental Diseases during summer, at the University and the Asylum.

EYE INFIRMARY. 78 Beds (921 house patients), 10,873 out-patients annually. Consulting Surgeon, George Buchanan, M.D. Surgeons, Thomas Reid, M.D., Thomas S. Meighan, M.D., and Henry E. Clark, M.R.C.S. Assistant Surgeons, J. Crawford Renton, M.B., D. N. Knox, M.B., and J. Macfie, M.D.

DISPENSARY FOR SKIN DISEASES, 8 Elmbank Street. Physician, Professor M'Call Anderson. Open Mondays and Thursdays at 4 P.M., for out-door patients. This Institution is in connexion with the Wards for Skin Diseases in the Western Infirmary, to which the more important cases are sent.

OPHTHALMIC INSTITUTION, 126 West Regent Street. Consulting Physician, Dr S. J. Moore. Acting Surgeon, Dr J. R. Wolfe. Acting Physician, Dr J. S. Cumming. Secretary, Henry Johnston, 11 Bothwell Street. Open daily from 1 to 3 P.M. A Course of Lectures and Clinical Instruction during the Winter and Summer Sessions.

GLASGOW HOSPITAL AND DISPENSARY FOR DISEASES OF THE EAR, 239-241 Buchanan Street. 12 Beds. Hour of visit to the Hospital, 3 P.M. Out-patients seen at 2 P.M. on Tuesdays, Wednesdays, Thursdays, and Fridays. Number of cases treated annually, 3600. During the Winter and Summer Sessions a Course of Practical Instruction in the Treatment of Ear Disease is given to the Students attending the Clinique. Senior Consulting Physician, Dr P. Stewart. Senior Consulting Surgeon, Dr James Morton. Consulting Dental Surgeon, Dr J. C. Woodburn. Physicians, Drs A. K. Irvine, A. L. Kelly, and J. Gardiner, Surgeon and Lecturer, Dr James Patterson Cassells.

The **HUNTERIAN MUSEUM** is open to Students of Medicine, for purposes of study, on presenting their matriculation tickets.

ABERDEEN.

ROYAL INFIRMARY. Upwards of 250 Beds. Visits daily at 12 o'clock. Physicians, Drs Smith-Shand, Beveridge, and Fraser. Surgeons, Drs A. Ogston, Will, Garden, and Hall. Ophthalmic Surgeon, Dr Davidson. Pathologist, Dr Rodger. Chloroformist, Dr P. Blaikie Smith. Dental Surgeon, Dr Williamson.

GENERAL DISPENSARY, LYING-IN AND VACCINE INSTITUTION. 7000 patients annually. Open daily.

CHILDREN'S HOSPITAL. Physicians, Drs Stephenson and Garden. Clinical instruction daily at 11 o'clock.

LUNATIC ASYLUM. Above 550 patients.

EYE INSTITUTION, General Dispensary Buildings, Guestrow. Open three days in the week at 2.30 P.M. Clinical Instruction on Diseases of the Eye and the use of the Ophthalmoscope. Average, 600 patients annually.

ARMY MEDICAL DEPARTMENT.

6 WHITEHALL YARD, S.W.

SCHEDULE OF QUALIFICATIONS NECESSARY FOR CANDIDATES DESIROUS OF OBTAINING COMMISSIONS IN THE ARMY MEDICAL DEPARTMENT.

1. Every candidate for a commission in the Army Medical Department must be 21 years of age and not over 28 years at the date of commencement of the competitive examination. He must produce an extract from the Register of his birth, or, in default, a declaration, made before a magistrate by one of his parents or guardians, giving his exact age. He must also produce a recommendation from some person of standing in society—not a member of

his own family—to the effect that he is of regular and steady habits, and likely in *every* respect to prove creditable to the Department if a commission be granted; and also a certificate of moral character from the parochial clergyman, if possible.

2. The candidate must sign a declaration upon honour that both his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor has any hereditary tendency thereto, nor any imperfection or disability that can interfere with the efficient discharge of the duties of a medical officer in any climate: also that he does not hold, and has never held, any commission or appointment in the public services. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that his vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia will not be considered a disqualification, provided it does not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes exists. The Board must also certify that he is free from organic or other disease, and from constitutional weakness, or tendency thereto, or other disability of any kind likely to unfit him for military service in any climate.

3. Certificates of age, registration of diplomas, etc., and of character, must accompany the declaration when signed and returned.

4. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a.* Anatomy and Physiology, 1000; *b.* Surgery, 1000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100. [*N.B.*—The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of Medical and Surgical patients at the bedside.] The eligibility of each candidate for the Army Medical Service will be determined by the result of the examination in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300; Natural Sciences, 300. The knowledge of Modern Languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

5. After passing this examination, every qualified candidate will be required to attend one course of practical instruction at the Army Medical School as a probationer on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

6. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact, and they will be required to provide themselves with uniform, viz., the regulation undress uniform of a surgeon, but without sword.

7. They will be required to attend the A. M. D. Mess at Netley, and to conform to the Rules and Regulations thereof.

The following Extracts regarding "First Appointments" and "Rank and Pay," from the Royal Warrant of 25th *June* 1881, *are republished for the information of Candidates for Commissions in the Army Medical Department.*

FIRST APPOINTMENTS.

Every candidate for appointment to the Medical ranks of the Army Medical Department shall possess two diplomas or licenses, recognised by the General Medical Council, one to practise Medicine, and the other Surgery, and shall be registered under the Medical Act in force in the United Kingdom at the time of his appointment.

A public and open competition shall be held twice in the year for the admission of qualified candidates as probationers. The number of appointments so competed for shall be not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on the 30th June or 31st December.

Not less than half the number of vacancies shall be filled up by competition, and it shall be competent for our Secretary of State to fill up the remaining number from such qualified candidates as may be proposed by the governing bodies of Public Schools of Medicine in our United Kingdom or in our Colonies as he may think proper. Every candidate so proposed shall be certified by the governing body proposing him to be duly qualified according to a standard to be laid down by our Secretary of State, and shall be approved by the Director-General.

Our Secretary of State shall from time to time fix the order of precedence and the proportion in which the several Schools of Medicine shall be offered the nomination of candidates.

A Surgeon on probation shall on appointment be sent to some large station for instruction in Ambulance and Hospital Corps duties, until the commencement of the next course of study at the Army Medical School. After passing through such course at the Army Medical School as our Secretary of State shall decide, the Surgeon on probation, after passing a qualifying examination in the military medical subjects taught there, and satisfying the Director-General that he is a person of proper skill, knowledge, and character, for permanent appointment in the Army Medical Department, shall be commissioned as Surgeon.

The Surgeons on probation who pass out of the Army Medical School at one qualifying examination shall take precedence among each other as Surgeons, as follows:—(*a*.) Those appointed on nomination according to their date of joining on probation. (*b*.) Those appointed on competition according to the last day of the competitive examination, and in the order of merit at such examination, with priority over any joining under sub-section (*a*) on the last day of the competitive examination.

A Surgeon's commission shall bear the date of the day of his passing out of the Army Medical School.

RANK AND PAY.

The ranks and daily rates of pay of the officers of the Army Medical Department shall be as follows:—Surgeon-General £2, 15s.; Deputy Surgeon-General £2; Brigade Surgeon, £1, 10s., after five years in the rank £1, 13s.; Surgeon-Major, £1, after fifteen years' service £1, 2s. 6d., after twenty years' service £1, 5s., after twenty-five years' service £1, 7s. 6d.; Surgeon, £200 a year, after five years' service £250, after ten years' service 15s. daily. Surgeon on probation 8s. Charge pay: the principal medical officer of an army in the field, consisting of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15s. daily; of less than 5000, 10s. daily. The principal medical officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, 5s. daily.

The pay of medical officers shall be issued monthly in arrear.

The relative rank of officers of the Army Medical Department shall be as follows:—I. A Surgeon-General and Director-General shall rank as Major-General. II. A Deputy Surgeon-General shall rank as Colonel. III. A Brigade Surgeon shall rank as Lieutenant-Colonel. IV. A Surgeon-Major shall rank as Major; after twenty years' service as Surgeon-Major he shall rank as Lieutenant-Colonel. V. A Surgeon shall rank as Captain. VI. A Surgeon on probation shall rank as Lieutenant.

NON-EFFECTIVE PAY.

The daily rates of retired pay or half-pay for Medical Officers shall be as follows :—Surgeon-General, £2. Deputy Surgeon-General, £1, 15s. Brigade Surgeon, under thirty years' service, £1, 7s. 6d.; after thirty years, £1, 10s. Surgeon-Major, after twenty years, £1; twenty-five years, £1, 2s. 6d.; after thirty years, £1, 5s. Surgeon or Surgeon-Major, under five years, 6s.; after five years, 8s.; after ten years, 10s.; after fifteen years, 13s. 6d.

ARMY MEDICAL SCHOOL.

ROYAL VICTORIA HOSPITAL, NETLEY.

President of the Senate.—T. Crawford, M.D., Director-General of the Army Medical Department.

Members of the Senate.—Sir J. Fayrer, M.D., K.C.S.I., F.R.S., Physician to the Council of India; Surgeon-General T. Longmore, C.B., Professor of Military Surgery; Surgeon-General W. C. Maclean, M.D., C.B., Professor of Military Medicine; William Aitken, M.D., F.R.S., Professor of Pathology; F. S. B. F. De Chaumont, M.D., F.R.C.S.E., F.R.S., Surgeon-Major, Professor of Military Hygiene; The Principal Medical Officer, Royal Victoria Hospital, Netley.

Assistant Professors.—Surgeons-Major William Cherry, W. R. Tobin, J. P. H. Boileau, M.D., and Sandford Moore, M.B.

Candidates for Commissions in the Army, and in the Queen's Indian Service, proceed to Netley after passing the Examination at London. At Netley they attend the Medical and Surgical Practice of the Royal Victoria Hospital, and learn the system and arrangements of Military Hospitals. During four months they attend the lectures given by the Professors and Assistant-Professors, and go through a course of practical instruction in the Hygienic Laboratory and Microscopical Room. The lectures and practical instruction are intended to explain the specialities of Military Medical Practice, attention being directed to gunshot and other wounds, surgical arrangements in the field during action and sieges, means of transport, field hospitals, tropical diseases and their means of investigation, service in India and in the various colonies, the sanitary arrangements in peace and war, and the means of carrying out the sanitary regulations. Every opportunity is taken of practising operations on the dead body, and practical points of a like kind.

INDIAN MEDICAL SERVICE.

REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR THE APPOINTMENT OF SURGEON IN HER MAJESTY'S INDIAN MEDICAL SERVICE.

1. *Limits of Age.*—All natural-born subjects of Her Majesty, between 22 and 28 years of age at the date of the examination, and of sound bodily health, may be Candidates. They may be married or unmarried. They must possess a Diploma in Surgery, or a license to practise it, as well as a Degree in Medicine, or a license to practise it in Great Britain or Ireland.

2. *Declaration to be submitted.*—They must subscribe and send in to the Military Secretary, India Office, Westminster, *so as to reach that address at least a fortnight before the date fixed for the Examination*, a declaration according to a prescribed form.

3. This declaration must be accompanied by the following documents :—

a. Proof of age, either by extract from the register of the parish in which the Candidate was born, or, where such extract is unattainable, by his own declaration (pursuant to the Act 5 & 6 Will. 4, c. 62), form of which can be obtained at the India Office. A certificate of baptism which does not afford proof of age will be useless.

b. A certificate of moral character from a magistrate, or a minister of the religious denomination to which the Candidate belongs, who has personally known him for at least the two years preceding the date of his application.

c. A certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licenses possessed by the Candidate.

4. *Physical Examination.*—The physical fitness of Candidates will be determined previous to examination by a Board of Medical Officers, who are required to certify that the Candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed.

Every Candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India.

5. *Subjects for Examination.*—On producing the foregoing qualifications, the Candidate will be examined by the examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows :—

	Marks.
a. Anatomy and Physiology,	1000
b. Surgery,	1000
c. Medicine, including Therapeutics, the Diseases of Women and Children,	1000
d. Chemistry and Pharmacy, and a practical knowledge of Drugs,	100

(The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.)

6. The eligibility of each Candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only.

7. *Voluntary Examination.*—Candidates who desire it will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica.

8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by Candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

9. The maximum number of marks allotted to the voluntary subjects will be as follows :—

French, German, and Hindustani (150 each),	450
Natural Science,	300

10. *Text-Books.*—The subjects for this part of the examination will be taken from the following books :—

Animal Kingdom, by W S. Dallas, F.L.S.

Outlines of the Structure and Functions of the Animal Kingdom, by Rymer Jones; or *Cours Elémentaire d'Histoire Naturelle*, par Milne Edwards.

Lindley's *School Botany*, Lindley's *Medical and Economic Botany*, Henfrey's *Elementary Course of Botany*.

Elements of Natural Philosophy, by Golding Bird and C. Brooks.

Physical Geography, by Mrs Somerville.

11. The Examiners in London will prepare a list in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General and communicated to the Professors of the Army Medical School. If any Candidate is found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley.

12. *Course at Netley.*—After passing this preliminary examination, Candidates

will be required to attend one entire course of practical instruction at the Army Medical School, before being admitted to examination for a commission, on—

(1.) Hygiène.
(2.) Clinical and Military Medicine.
(3.) Clinical and Military Surgery.
(4.) Pathology of Diseases and Injuries incident to Military Service.

These courses are to be of not less than four months' duration; but Candidates who have already gone through a course at Netley as Candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time.

13. *Pay and Uniform while at Netley.*—During the period of his residence at the Army Medical School, each Candidate will receive an allowance of 8s. per diem with quarters, or, when quarters are not provided, with the usual lodging and fuel and light allowances of subalterns, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of a Surgeon of the British Service, but without the sword).

14. All Candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

15. *Examination at Netley.*—At the conclusion of the course, Candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School.

The Director-General, or any Medical Officer deputed by him, may be present and take part in the examination. If the Candidate give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a Commission as Surgeon.

16. *Position on List of Surgeons, how determined.*—The position of the Candidates on the list of Surgeons will be determined by the combined results of the preliminary and of the final examinations, and, so far as the requirements of the service will permit, they will have the choice of Presidency in India according to their position in that list.

India Office, *August* 1882.

N.B.—The examinations for admission to the Indian Medical Service usually take place twice a year, viz., in February and in August.

MEMORANDUM REGARDING THE POSITION OF MEDICAL OFFICERS TO BE APPOINTED TO HER MAJESTY'S INDIAN FORCES.

India Office, February 1882.

1. The regulations are those in force at the present time. They are subject to any alteration that may be determined on.

2. *Passage to India.*—Passage allowance to India on appointment will be given, or a passage provided. When passages are provided on board the Indian troop-ships, a charge for messing will be made at the rate laid down in the Royal Passage Warrant of 1st April 1879—viz., 2s. a day. Wine and beer are not included in the mess, but when provided are charged for as extras.

3. All Surgeons who shall neglect or refuse to proceed to India under the orders of the Secretary of State for India within two months from the date of leaving Netley, will be considered as having forfeited their appointment, unless special circumstances shall justify a departure from this regulation.

4. *Pay previous to Embarkation.*—Pay at the rate of 10s. a day will be allowed from date of passing final examination at the Army Medical School, until date of embarkation when a passage is provided, or for a period of two months when the Surgeon is permitted to make his own arrangements for passage. An advance of two months' pay will also be made on embarkation.

5. *Grades and Relative Rank.*—The grades of Medical Officers in the Indian Military Forces are six in number, viz.:—

1. Surgeon-General, ranking as Major-General, according to the date of his commission.
2. Deputy Surgeon-General, as Colonel, according to the date of his commission.
3. Brigade Surgeon, as Lieutenant-Colonel, according to the date of his commission, or according to the date upon which he completed twenty years' service as Surgeon and Surgeon-Major.
4. Surgeon-Major, as Major, according to the date of his commission; and after twenty years' service as Surgeon and Surgeon-Major, as Lieutenant-Colonel.
5. Surgeon, as Captain, according to the date of his commission.
6. Surgeon on probation, as Lieutenant.

6. *Promotion.*—A Surgeon is promoted to Surgeon-Major on completion of twelve years' service from date of first commission.

7. In cases, however, of emergency, or when the good of the service renders such alteration desirable, it is competent for the Secretary of State for India, on the recommendation of the Viceroy and Governor-General of India in Council, to shorten the period of service above mentioned, in such manner as he shall deem fit and expedient.

8. All promotion from the rank of Surgeon-Major to that of Brigade Surgeon, from the rank of Brigade Surgeon to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, is given by selection for ability and merit.

9. On appointment as Honorary Physician or Honorary Surgeon to Her Majesty, an officer below the rank of Deputy Surgeon-General shall be promoted to that rank.

10. Time passed on half-pay will in no case be reckoned as service in calculating claims for promotion.

11. *Tenure of Office in Administrative Grades.*—The tenure of office of Surgeons-General and Deputy Surgeons-General is limited to five years.

12. Deputy Surgeons-General, if not disqualified by age, are eligible either for employment for a second tour of duty in the same grade, or for employment in the higher grade of Surgeon-General by promotion thereto.

13. Absence on leave in excess of six months on medical certificate, or of four months on private affairs, involves forfeiture of appointment.

14. *Pay and Allowances when in India.*—Officers who may hereafter be appointed to the Indian Medical Service will receive pay in India according to the following scale:—

Rank.	Years' Service.	Pay and Allowances per Mensem.		
		R.	A.	P.
Brigade Surgeon and Surgeon-Major .	25	888	12	0
" . .	20	852	3	7
" . .	15	677	6	11
" . .	12	640	14	6
Surgeon . . .	10	410	9	5
" . . .	6	392	5	2
" . . .	5	304	14	2
" . . .	under 5	286	10	0

15. On first appointment they will only come into receipt of Indian pay and allowances from the date of their arrival in India.

16. The monthly salaries of the principal administrative and military

appointments are fixed at the following consolidated sums:—Surgeon-General, Bengal, Rs. 2700; Madras, Rs. 2500; Bombay, Rs. 2500; Deputy Surgeon-General, two at Rs. 2250, others Rs. 1800; Brigade Surgeon or Surgeon-Major, of twenty years' service and upwards, in charge of Native regiments, Rs. 1000, with Rs. 90 horse allowance in Cavalry regiments; Brigade Surgeon or Surgeon-Major in charge of Native regiments, Rs. 800, with Rs. 90 horse allowance in Cavalry regiments; Surgeon, above five years' full-pay service, in charge of Native regiments, Rs. 600, with Rs. 60 horse allowance in Cavalry regiments; Surgeon, under five years' full-pay service, in charge of Native regiments, Rs. 450, with Rs. 60 horse allowance in Cavalry regiments.

17. The salaries of other medical appointments in the Civil and Military Departments are consolidated, and vary from Rs. 1800 to Rs. 400 per mensem.

18. Qualified officers of the Medical Service are also eligible for appointments in the Assay Department. The salaries of these appointments are from Rs. 600 to Rs. 2250 per mensem.

19. A medical officer will, however employed, be restricted to the rate of pay laid down in para. 14, until he shall have passed the examination in Hindustani, known as the "Lower Standard."

20. Surgeons-General and Deputy Surgeons-General, on vacating office at the expiration of the five years' tour of duty, will be permitted to draw *in India* respectively an unemployed salary of Rs. 1200 per mensem in the former, and Rs. 900 in the latter case, for a period of six months from the date of their vacating office, after which they will be placed while unemployed on the following scale of pay:—Surgeon-General, after thirty years' service on full-pay, £2, 5s.; after twenty-five years' service on full-pay, £2, 5s.; after twenty years' service on full-pay, or on promotion should this period of service not be completed, £2; Deputy Surgeon-General, after thirty years' service on full-pay, £1, 14s.; after twenty-five years' service on full-pay, £1, 10s.; after twenty years' service on full-pay, or on promotion should this period of service not be completed, £1, 8s.

21. *Furloughs.*—An officer will be eligible for one year's furlough on the completion of five years' actual service in India, and for an additional year after each subsequent five years' service.

22. While on furlough under the above rule an officer will receive half the emoluments of his office, but will not draw more than £1000 or less than £250 per annum.

23. Upon certificate of a Medical Board, an officer not entitled to furlough, if he has served not less than two years in India, may receive it for any period not exceeding two years.

24. Officers of the Administrative Grades are entitled during their tenure of appointment to six months' leave of absence on sick certificate, or four months' leave on private affairs.

25. *Honours and Rewards.*—Officers of the Indian Medical Service are eligible for the military distinction of the Order of the Bath, and for good service pensions.

26. Six of the most meritorious officers are named Honorary Physicians, and six Honorary Surgeons to Her Majesty.

27. *Retiring Pensions and Half-Pay.*—Officers of the Indian Medical Service will be allowed to retire on the following scale of pension, on completion of the required periods of service:—After thirty years' service for pension, £700; after twenty-five years' service for pension, £500; after twenty years' service for pension, £365; after seventeen years' service for pension, £292.

28. Time of service for pension will reckon from date of arrival in India, and will include furlough taken under the rules referred to in par. 21. The period of residence at the Army Medical School will also reckon as service for the above pension, except in the cases of officers who have gone through the course at Netley as candidates for the British Army or Navy Medical Service.

29. A Surgeon-General, after five years' active employment in India in that grade, will be entitled to retire upon a pension of £350 per annum, in addition to that to which he may be entitled under the above scale.

30. A Deputy Surgeon-General will, after five years' active employment in India in that grade, be entitled to retire upon a pension of £250 per annum, in addition to the pension to which he may be entitled under the above scale.

31. In each of the above cases stated in paras. 29 and 30, six months' absence on medical certificate will be allowed to count towards actual service in those grades.

32. A Surgeon-General or Deputy Surgeon-General who has completed his term of service and has reverted to British pay, may reside in Europe, at the same time qualifying for higher pension.

33. With a view to maintain the efficiency of the service, all medical officers of the rank of Brigade Surgeon and Surgeon-Major shall be placed on the Retired List when they shall have attained the age of fifty-five years, and all Surgeons-General and Deputy Surgeons-General when they shall have attained the age of sixty years. In any special case, where it would appear to be for the good of the service that the officer should continue in employment, he may be so continued, subject in each case to the sanction of the Secretary of State for India in Council.

34. A medical officer retiring after a service of twenty years and upwards may, if recommended for the same by the Government of his Presidency, receive a step of honorary rank, but without any consequent increase of pay.

35. Medical officers not entitled to pension, but who, at the expiration of two years' leave of absence on medical certificate, are unfit to return to duty, will be placed on temporary or permanent half-pay, after examination by the Medical Board at the India Office. The half-pay granted in such a case will be the British rate of half-pay of the relative rank held by the officer :—Brigade Surgeon or Surgeon-Major of twenty years' service ranking with Lieutenant-Colonel, 11s. per day; Surgeon-Major, ranking with Major, 9s. 6d. per day; Surgeon, ranking with Captain, 7s. per day. Officers cannot retire *in India* on half-pay (No. 54, 28th February 1865).

36. The period passed on half-pay will in no case be reckoned as service in calculating claims for promotion or to pension on retirement.

37. *Wound Pensions.*—Medical officers are entitled to the same allowances granted to Her Majesty's Indian Military Forces on account of wounds and injuries received in action as combatant officers holding the same relative rank.

38. *Family Pensions.*—The claims to pension of widows and families of medical officers shall be treated under the provisions of such Royal Warrant regulating the grant of pensions to the widows and families of British officers as may be in force at the time being. (The Royal Warrant of 25th June 1881 is the one now in force.)

39. The widows and families of medical officers are also entitled to pensions from the Indian Service Family Pension Fund, to which all Surgeons must, as a condition of their appointment, subscribe from the date of their arrival in India.

NAVY MEDICAL DEPARTMENT.

Admiralty, 44 *Spring Gardens*, *London*, *S.W.*

REGULATIONS FOR ENTRY OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL DEPARTMENT OF THE ROYAL NAVY.

1. Every candidate for admission into the Medical Department of the Royal Navy must be not under 21 nor over 28 years of age on the day on which he presents himself for examination. He must produce a certificate from the district registrar of the date of his birth; or, in default, a declaration made before a magistrate, from one of his parents or other near relative, stating the date of birth. He must also produce a certificate of moral character, and a recommendation signed by a clergyman or magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.

2. He must be registered, under the Medical Act in force at the time of his appointment, as possessing two diplomas or licences recognised by the General Council, one to practise medicine and the other surgery in Great Britain and Ireland.

3. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, or any other imperfection or disability which may interfere with the most efficient discharge of the duties of a medical officer in any climate.

His physical fitness will be determined by a board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test types.

He must also declare his readiness to engage for general service at home or abroad as required.

4. Candidates will be examined in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of Drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of Surgical Apparatus, and the examination of Medical and Surgical patients at the bedside.)

The eligibility of each candidate will be determined by the result of the examinations in these subjects only.

Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica, also in French and German; and their position on the list of successful competitors will be improved by the number of marks gained in Natural Science and Modern Languages.

5. Every candidate, immediately after passing this examination, will receive a Commission as a Surgeon in the Royal Navy, and will undergo a course of practical instruction in Naval Hygiene, etc., at Haslar Hospital.

The full and half-pay per day of Naval Medical Officers is in accordance with the following scale:—FULL-PAY: Surgeon—On entry, 11s. 6d.; after 4 years' full-pay service, 13s. 6d.; after 8 ditto, 15s. 6d. Staff Surgeon—On promotion, £1, 1s.; after 4 years' full-pay service in rank, £1, 4s. Fleet Surgeon—On promotion, £1, 7s.; after 4 years' full-pay service in rank, £1, 10s.; after 8 ditto, £1, 13s. Deputy Inspector General, £2, 2s. Inspector General, £2, 15s. On first appointment to the service, medical officers will receive full pay from date of appointment, but subject to the provisions of Art. 1255, clause 2, of the Queen's Regulations, 1879. HALF-PAY: Surgeon—Under 2 years' full-pay service, 6s.; after 2 years' full-pay service, 7s.; after 4 ditto, 8s.; after 6 ditto, 9s.; after 8 ditto, 10s.; after 10 ditto, 11s. Staff Surgeon—On promotion, 12s.; after two years' full-pay service in rank, 13s.; after 4 ditto, 14s.; after 6 ditto, 15s. Fleet Surgeon—On promotion, 17s.; after two years' full-pay service in rank, 18s.; after 4 ditto, 19s.; after 6 ditto, £1. Deputy Inspector General—On promotion, £1, 5s.; after 2 years' full-pay service in rank, £1, 7s.; after 4 ditto, £1, 9s. Inspector General, £1, 18s.

PRELIMINARY EXAMINATIONS for the DIPLOMAS of the ROYAL COLLEGES of PHYSICIANS and SURGEONS of EDINBURGH, during the Year 1882-83.

I. The *Preliminary Examination* in *General Education* for the Double Qualification in Medicine and Surgery conferred conjointly by the Royal Colleges of Physicians and Surgeons, and also for the separate Diploma of each College, for October 1882, will embrace the following subjects:—

1. *English Language*, including Grammar and Composition; *English History*; *Modern Geography*.
2. *Arithmetic*, including Vulgar and Decimal Fractions.
3. *Algebra*, up to and including Simple Equations.
4. *Geometry*; First two books of Euclid, or the subjects thereof.
5. *Latin*, including Translation and Grammar.
6. *Elementary Mechanics of Solids and Fluids*, comprising the Elements of Statics, Dynamics, and Hydrostatics. *Note.*—This subject may be passed at any period previous to the first Professional Examination.
7. *Optional Subjects*, of which one only is required to be passed: (1.) *Greek*; (2.) *French*; (3.) *German*.

II. The Examination in *English History* will embrace the period from 1714 to 1815 inclusive; and in *Modern Geography*, the Geography of Great Britain, and the principal Physical Features and Political Divisions of Europe.

In *Latin*, the Books prescribed are Livy, Book I.; and Horace, *Epistles*, Book I. Besides translations from either of these, at the choice of the Candidate, the examination will include grammar, translation of a passage from an unprescribed author, and translation of a passage from English into Latin, the more difficult words being supplied.

In *Greek*, the books prescribed are, Herodotus, Book II., and Euripides, *Medea*. Besides translations from either of these, at the choice of the Candidate, parsing, derivation of English words from Greek, and translation of a passage from English into Greek, are required.

In *French*, the book prescribed is About, *La Mère de la Marquise*. Parsing and translation from English into French are also required.

In *German*, the book prescribed is Gœthe's *Egmont*. Parsing and translation from English into German, are also required.

III. The examinations will be held in the Hall of the College of Physicians, 9 Queen Street, on the following days, beginning each day at 1 P.M. — Saturday, 14th October, and Monday, 16th October, and Tuesday, 17th October, 1882. The subjects of the first day's examination will consist of English, History, Geography, and Latin; of the second day's examination, Arithmetic, Algebra, and Geometry; and of the third day's examination, of Elements of Mechanics, and the optional subjects.

IV. *The Preliminary Examination in General Education during the year* 1883 will embrace the following subjects:—

1. *English Language*, including Grammar and Composition; *English History*; *Modern Geography*.
2. *Arithmetic*, including Vulgar and Decimal Fractions.
3. *Algebra*, up to and including Simple Equations.
4. *Geometry*, First two books of Euclid, or the subjects thereof.
5. *Latin*, including Translation and Grammar.
6. *Elementary Mechanics of Solids and Fluids*, comprising the Elements of Statics, Dynamics, and Hydrostatics. *Note.*—This subject may be passed at any period previous to the first Professional Examination.
7. *Optional Subjects*, of which one only is required to be passed: (1.) *Greek*; (2.) *French*; (3.) *German*.

V. The Examination in *English History* will embrace the period from 1714 to 1815 inclusive; and in *Modern Geography*, the Geography of Great Britain, and the principal Physical Features and Political Divisions of Europe.

In *Latin*, the books prescribed are Livy, Book I.; and Horace, *Epistles*, Book I. Besides translations from either of these, at the choice of the candidate, the examination will include Grammar, translation of a passage from an unprescribed author, and translation of a passage from English into Latin, the more difficult words being supplied.

In *Greek*, the books prescribed are Herodotus, Book II.; Euripides, *Medea*. Besides translations from either of these, at the choice of the candidate, parsing, derivation of English words from Greek, and translation of a passage from English into Greek, are required.

In *French*, the book prescribed is About, *La Mère de la Marquise*. Parsing and translation from English into French are also required.

In *German*, the book prescribed is Goethe, *Egmont*. Parsing and translation from English into German are also required.

VI. The Examinations during 1883 will be held in the Hall of the College of Physicians, 9 Queen Street, on the following days, beginning each day at 1 P.M.:—Tuesday, April 10th, Wednesday, April 11th, and Thursday, April 12th; Friday, July 6th, Saturday, July 7th, and Monday, July 9th; and on Saturday, October 13th, Monday, October 15th, and Tuesday, October 16th. The subjects of the first day's Examination will consist of English, History, Geography, and Latin; of the second day's Examination, Arithmetic, Algebra, and Geometry; and of the third day's Examination, of Elements of Mechanics, and the optional subjects.

VII. Each candidate shall pay a fee of Ten Shillings previous to the examination; and, in the event of his being unsuccessful, he shall pay a fee of Five Shillings for each subsequent examination at which he is present.

Candidates are required to give their names and pay their fees to the officer of the Royal College of Physicians not less than two days prior to the day of the examination. Candidates at a distance should send their fees by post-office order, which should be made payable to John Broome, Officer, Royal College of Physicians, Edinburgh.

VIII. The examinations will be conducted according to the following regulations:—

1. The competence of the candidate will be ascertained by means of written exercises.

2. Each candidate must fill up a form (to be obtained from the officer) giving his name, place of birth, and an address that will find him by post, distinctly written on it, and specifying the subjects in which he wishes to be examined.

3. The exercises on each of the subjects must, in every case, be written on separate papers; and the candidate must attach his signature to each sheet of his written paper, and on the outside when folded, before giving it in to those who superintend the examination.

4. Books must not be employed, nor may assistance be given by one candidate to another, during the examination. Those who violate this rule shall forfeit their right to a certificate.

5. The decision of the examiners will be intimated to each candidate as soon as possible. Those who pass the examination will receive certificates to that effect. In the case of those who are successful in part of the examination only, the subjects in which they have passed will be recorded, and they will not be again examined in the branch or branches in which they have been successful.

IX. A certificate of having passed all the required subjects of the above examination entitles the possessor, on commencing Medical Study, to be registered as a Medical Student in the form required by the regulations of the General Medical Council, and, provided the candidate passes in three books of Euclid, is also admitted *pro tanto* by the Medical Faculty of the University of Edinburgh as an equivalent for the corresponding subjects of their Preliminary Examination for intending Graduates in Medicine.

A list of Examining Boards in the United Kingdom and in the Colonies, whose certificates are received *pro tanto* by the Royal Colleges, on the recommendation of the General Medical Council, will be found at page 336.

Frequent inquiries having been made as to the exact nature of the Preliminary Examination for the Diplomas of the Royal Colleges of Physicians and Surgeons of Edinburgh, the Secretaries have supplied the following papers, which were given out at the examinations in 1880:—

ENGLISH.

The candidate is required:—

1. To write a passage dictated by the examiner, with strict attention to spelling and punctuation.

2. To give the meaning and derivation of at least eight of the following words:—

Transference, Apparition, Subject, Performance, Controversy, Direction, Important, Fugitive, Consolation, Destruction, Eulogy, Triumvirate.

3. To give a grammatical analysis of the following sentence:—

"I may indeed venture to hope that such readers, if they follow me with no unkindly spirit through these pages, may find considerations of real weight and importance, which will solve imaginary difficulties and supply an answer to real objections."

4. To write a short essay on the following subject:—

"Iron, and its useful applications." (The chemistry of the subject not expected.)

[The essay need not exceed half a folio page.]

FRENCH.

Translate into English:—

Ariste.

Allez, c'est se moquer. Votre femme, entre nous,
Est, pas vos lâchetés, souveraine sur vous.
Son pouvoir n'est fondé que sur votre faiblesse;
C'est de vous qu'elle prend le titre de maîtresse;
Vous-même à ses hauteurs vous vous abandonnez,
Et vous faites mener en bête par le nez.
Quoi! vous ne pouvez pas, voyant comme on vous nomme,
Vous résoudre une fois à vouloir être un homme,
A faire condescendre une femme à vos vœux,
Et prendre assez de cœur pour dire un Je le veux!
Vous laisserez, sans honte, immoler votre fille
Aux folles visions qui tiennent la famille,
Et de tout votre bien revêtir un nigaud,
Pour six mots de latin qu'il leur fait sonner haut;
Un pédant qu'à tout coup votre femme apostrophe
Du nom de bel esprit et de grand philosophe,
D'homme qu'en vers galans jamais on n'égala,
Et qui n'est, comme on sait, rien moins que tout cela!
Allez, encore un coup, c'est une moquerie,
Et votre lâcheté mérite qu'on en rie.

Chrysale.

Oui, vous avez raison, et je vois que j'ai tort.
Allons, il faut enfin montrer un cœur plus fort,
Mon frère.

2. Conjugate the following verbs: *prendre*, *voir*, *vouloir*, *condescendre*, *tenir*, *savoir*.

3. Write out in full the imperative of *se résoudre*.

4. Give the feminine of *garçon*, *gendre*, *neveu*, *cheval*, *âne*, *cochon*, *taureau*, *coq*.

5. Translate into French:

The simplicity of this rural (*champêtre*) life did me a good of inestimable price, in opening my heart to friendship. Till then I had only known sentiments elevated, but imaginary. The custom of living together in a peaceful state united me tenderly to my cousin William. In a short time I had for him sentiments more affectionate than those which I had had for my brother, and which have never been effaced.

GERMAN.

1. Translate into English :—

Maria (mit ruhiger Hoheit im ganzen Kreise herumsehend).
Was klagt ihr? Warum weint ihr? Freuen solltet
Ihr euch mit mir, dass meiner Leiden Ziel
Nun endlich naht, dass meine Bande fallen,
Mein Kerker aufgeht, und die frohe Seele sich
Aus Engelsflügeln schwingt zur ew'gen Freiheit.
Da, als ich, in die Macht der stolzen Feindin
Gegeben war, Unwürdiges erduldend,
Was einer freien, grossen Königin
Micht ziemt, da war es Zeit, um mich zu weinen!
Wohlthätig, heilend nahet mir der Tod,
Der ernste Freund! Mit seinen schwarzen Flügeln
Bedeckt er meine Schmach—Den Menschen adelt,
Den tiefstgesunkenen, das letzte Schicksal.
Die Krone fühl' ich weider auf dem Haupt,
Den würd'gen Stolz in meiner edeln Seele!
(Indem fie einige Schritte weiter vortritt.)
Wie? Melvil hier?—Nicht also, edler Sir?
Steht auf! Ihr seid zu eurer Königin
Triumph, zu ihrem Tode nicht gekommen.

2. Give the principal parts (first person singular present and imperfect indicative, and past participle) of *fallen, aufgeht, schwingt, vortritt, gekommen.*

3. Decline throughout, *sein schwarze Flügel.*

4. Translate into German:

What o'clock is it? It is late, it is ten o'clock. It is fine weather to-day. It has frozen (*friern*) last night. It was very slippery (*glatt*); a man fell and has broken his leg (*Bein*). What is to be done? Send for the doctor.

GREEK.

I. Translate :—

(*Xenophon, Book III.*)

Ἐνταῦθα ἔμειναν ἡμέρας τρεῖς, καὶ τῶν τερωμένον ἕνεκα, καὶ ἅμα ἐπιτήδεια πολλὰ εἶχον, ἄλευρα, οἶνον, κριθὰς ἵπποις συμβεβλεμένας πολλάς. ταῦτα δὲ συνηγμένα ἦν τῷ σατραπεύοντι τῆς χώρας. τετάρτῃ δ' ἡμέρᾳ καταβαίνουσιν εἰς τὸ πεδίον. Ἐπεὶ δὲ κατέλαβεν αὐτοὺς Τισσαφέρνης σὺν τῇ δυνάμει, ἐδίδαξε τοὺς Ἕλληνας τῇ ἀνάγκῃ κατασκηνῆσαι, οὗ πρῶτον εἶδον κώμην, καὶ μὴ πορεύεσθαι ἔτι μαχομένους. πολλοὶ γὰρ ἦσαν ἀπόμαχοι, οἱ τετρωμένοι, καὶ οἱ ἐκείνους φέροντες, καὶ οἱ τῶν φερόντων τὰ ὅπλα δεξάμενοι. Ἐπεὶ δὲ κατεσκήνησαν, καὶ ἐπεχείρησαν αὐτοῖς ἀκροβολίζεσθαι οἱ βάρβαροι πρὸς τὴν κώμην προσιόντες, πολὺ περιῆσαν οἱ Ἕλληνες. πολὺ γὰρ διέφερεν, ἐκ τῆς χώρας ὁρμῶντας ἀλέξασθαι, ἢ πορευομένους ἐπιοῦσι τοῖς πολεμίοις μάχεσθαι. Ἡνίκα δ' ἦν ἤδη δείλη, ὥρα ἦν ἀπιέναι τοῖς πολεμίοις. οὔ ποτε γὰρ μεῖον ἀπεστρατοπεδεύοντο οἱ βάρβαροι τοῦ Ἑλληνικοῦ ἑξήκοντα σταδίων, φοβούμενοι μὴ τῆς νυκτὸς [οἱ Ἕλληνες] ἐπιθοῖντο αὐτοῖς.

Parse *ἔμειναν*. Parse *τετρωμένων*. Parse *ἄλευρα*; from what verb is it derived? Parse *συνβεβλημένος*. Parse *συνηγμένα*; give the first person singular of the second aorist active of this verb. Decline *ἡμέρᾳ* in the singular, dual, and plural. What English word comes from it? Parse *δυνάμει*. What English words are derived from it? Parse *ἀκροβολίζεσθαι*; give its derivation. Parse *μεῖον*. Parse *ἐπιθοῖντο*.

II. Translate :—

(*Iliad, Book II.*)

Ὣς φάτο, νεικείων Ἀγαμέμνονα, ποιμένα λαῶν,
Θερσίτης· τῷ δ' ὦκα παρίστατο δῖος Ὀδυσσεὺς,
Καί μιν ὑπόδρα ἰδὼν χαλεπῷ ἠνίπαπε μύθῳ.
Θερσῖτ' ἀκριτόμυθε, λιγύς περ ἐὼν ἀγορητὴς,
Ἴσχεο, μηδ' ἔθελ' οἶος ἐριζέμεναι βασιλεῦσιν.
Οὐ γὰρ ἐγὼ σέο φημὶ χερειότερον βροτὸν ἄλλον

Ἔμμεναι, ὅσσοι ἅμ' Ἀτρείδης ὑπὸ Ἴλιον ἦλθον·
Τῷ οὐκ ἂν βασιλῆας ἀνὰ στόμ' ἔχων ἀγορεύοις,
Καί σφιν ὀνείδεά τε προφέροις, νόστον τε φυλάσσοις,
Οὐδέ τί πω σάφα ἴδμεν, ὅπως ἔσται τάδε ἔργα,
Ἢ εὖ, ἠὲ κακῶς, νοστήσομεν υἷες Ἀχαιῶν.
Τῷ, νῦν Ἀτρείδῃ Ἀγαμέμνονι, ποιμένι λαῶν,
Ἧσαι ὀνειδίζων, ὅτι οἱ μάλα πολλὰ διδοῦσιν
Ἥρωες Δαναοί· σὺ δὲ κερτομέων ἀγορεύεις.

Parse *νεικείων*. Parse *ἀκριτόμυθε*; give its derivation. Parse *ἴδμεν*. Parse *κακῶς*; give the corresponding adjective, and compare it. Parse *νοστήσομεν*. Compare *μάλα*. Parse and compare *πολλὰ*. Parse *ἀγορεύεις*.

III. Render into Greek the following English passage :—

A dog, carrying meat, was crossing a river. Seeing his own shadow (*σκιὰ*) on the water, he supposed (*ὑπολαμβανω*) that it was another dog also carrying (*κατεχω*) meat; and, letting go (*αφεις*) his own, he thought (*ορμαω*) to take that of the other dog, but lost both.

IV. Give the Greek derivation of the following English words:

Dipsomania, Kleptomania, and Monomania; Zoophyte, Neophyte, Strategy, Economy, Anabaptist, Pædo-baptist, Phonograph, Telephon, Laity, Polytechnic, Panorama, Epitaph, Epigram, Epithet.

[The Candidate, in order to pass, must do all these numbers, and obtain 75 per cent. marks.]

ARITHMETIC.

The full work of every question must be given.

1. Calculate to 5 places of decimals the values of

$$1+\frac{1}{2}+\frac{1}{2.3}+\frac{1}{2.3.4}+\frac{1}{2.3.4.5}+\frac{1}{2.3.4.5.6};$$

and of the square root of 0·8.

2. Find the values of $\dfrac{1\frac{1}{8}\text{ of }1\frac{2}{5}}{\frac{7}{8}\text{ of }1\frac{4}{7}}$ and $\dfrac{\frac{0\cdot08}{1\cdot35}}{\frac{1\cdot2}{36\cdot5}}$.

3. How many days from July 14th to October 27th, both inclusive?

4. What sum will increase by £100 in 3 years at 5 per cent. compound interest?

5. A man sells 3 per cents. at 81, and invests the proceeds in 3½ per cents. at 92. What is the percentage alteration of his income from the money?

6. A grocer buys two kinds of tea, one at 2s., the other at 2s 6d. per pound. In what proportion must he mix them, so as to realize 20 per cent. profit by selling at 2s. 9d.?

7. Allowing 64 lbs. of water to a cubic foot, what is the weight of the contents of a bath 70 in. × 37 in. filled to a depth of 19 inches?

8. Show that any integral number of pounds up to 121 can be weighed by means of the five weights, 1, 3, 9, 27, and 81 lbs.

ALGEBRA.

The full work of every question must be given.

1. Find the values of:

$$\frac{(ly-mx)^2+(mz-ny)^2+(nx-lz)^2+(lx+my+nz)^2}{l^2+m^2+n^2},$$

and $(x+y+z)(x-y+z)(x+y-z)(-x+y+z)$,

in their simplest forms.

2. Find the factors of $x^2 + \frac{1}{x^2} - \left(a + \frac{1}{a}\right)$.

3. Divide $1 - 3x^3 + 3x^6 - x^9$ by $1 - 2x + x^2$.

4. Extract the square root of

$$(1 + x^8) + 2x(1 + x^6) + 3x^2(1 + x^4) + 4x^3(1 + x^2) + 5x^4.$$

5. Solve the equations:

(α) $\frac{x-3}{2x-1} \cdot \frac{1+2a}{3+a} = 1$.

(β) $(x + 5)^2 - (6 - x)^2 = 33$.

(γ) $(1 + x + x^2)^2 - (1 - x + x^2)^2 = 10(x^2 + 1)$.

6. One pipe can fill a water-barrel in an hour, another can fill it in two hours. The barrel is placed under the first for a certain time, then under the second for an equal time, then under both for the same time, and is filled. What is that time?

7. A, B, and C have each the same number of nuts. A gives B half of his and five more; B then gives C half of what he has and 10 more; C gives A half of what he has and 15 more. Then A has three times as many as at first. How many had each, and how many has he?

NATURAL PHILOSOPHY.

1. What is meant by velocity, and how is it measured? Taking the earth's radius as 4000 miles, what is the velocity of bodies at the equator in consequence of the diurnal rotation?

2. Explain the action of a hydraulic press.

3. If a stone be let fall, and three seconds afterwards another be thrown down with a velocity of 100 feet per second, when will it overtake the first?

4. Describe one form of Hydrometer, explain its use, and show how it can be graduated.

5. Why is greater pressure required to burst a small boiler than a large one of the same shape, both being made of the same boiler-plate? Give other illustrations of the same principle.

6. Enunciate the proposition called the "Parallelogram of Forces," and give a satisfactory proof of it.

7. A uniform force stops a train in one minute, and during that time the train runs 300 yards; what was the velocity of the train, and what ratio does the force bear to the weight of the train?

Part Fourth.

PERISCOPE.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

Laparotomy. The Atrophic Ligature of the Ovaries in order to arrest their Physiological Function. Contributions to the Intra-Peritoneal Treatment of the Uterine Stump in Removal of the Uterus, by Dr Geza v. Antal, Privat Docent in Budapest.—The above is the title of an interesting article in No. 30, *Centralblatt für Gynäkologie*, 1882, in which the author urges the propriety of ligaturing one by one the ovarian arteries, instead of removing the entire ovary, and allowing the ovary to remain and atrophy from starvation. The cases recommended for its adoption are in uterine fibroids, uterine hypertrophy, versions and flexions of the uterus, in conditions of the uterus and vagina which hinder the secretion of the menses when they cannot be removed by other measures, in minor cystic degeneration of the ovaries, in ovarian displacements, in some inflammatory conditions of the ovaries where they are not deeply embedded in exudative masses. When the ovary is extensively degenerated and hypertrophied, the author allows that the procedure is inapplicable. Dr Geza recommends the ligature of the ovarian vessels as less dangerous than removal of the ovary. Dr Geza is entirely in favour of intra-uterine treatment of the stump in ovariotomy, but after removal of the tumour he recommends the vessels to be tied one by one with catgut ligatures, and the peritoneal surfaces brought together with sutures before the stump is dropped into the peritonæum. In this way a large ligature embracing the whole stump is not needed. Of 30 cases so treated by the author and others, in only one did hæmorrhage supervene. In the management of the uterine stump in cases of fibroid tumour, the author strongly recommends the method of Kovács and Schrœder to be followed. This may be stated briefly to consist in placing a caoutchouc ring over the lower part of the stump during operation, to prevent bleeding; then the stump is cut in a funnel-shaped fashion. The individual arteries in the uterus and in the broad ligaments are separately tied. The peritoneal edges of the broad ligaments are brought together. The cut surfaces of the stump are finally brought together by deep sutures which include the peritoneal surfaces of the stump. To avoid the possibility of infection from the vagina, the author further recommends to obliterate the inner os by bringing the parts immediately above it into contact with catgut sutures before employing the deep sutures that unite the raw surfaces and approximate the peritoneal edges. This method of treating the stump of fibroid tumours intra-peritoneally, the author maintains, gives better results than any extra-peritoneal method.

CONTRIBUTION TO THE MANAGEMENT OF THE STUMP AFTER SUPRA-VAGINAL AMPUTATION OF THE UTERUS, from Freund's Clinic, communicated by Dr L. Homberger, No. 31, *Centralblatt für Gynäkologie*, 1882.—This paper contains a proposed improvement in the management of the stump in the operation above mentioned, and details a case in which the method was employed by Dr Freund. The object aimed at is to have some arrangement which, without involving the risks of the intra-peritoneal method, shall secure its advantages and also those of the extra-peritoneal method. The plan adopted is to ligature the broad ligaments and the uterine stump firmly with caoutchouc ligatures, then to bring them all together by means of a thin guttapercha tube of considerable diameter, tie this tube firmly round the stump beyond the stout ligatures by an elastic band, and bring the free ends of the ligatures through the tube—the latter being led through the abdominal wound to the outside. The permanency of the guttapercha tube as a drain was secured by slipping into it a somewhat funnel-shaped glass drainage-tube. In this way all strain or dragging was removed from the stump, whilst free exit was effected for the discharges from it, and nothing was allowed to escape into the peritoneal cavity. The result proved on the whole satisfactory, though it was 56 days ere the stump and large ligature were removed. The author thinks a method of this kind may be found specially to suit cases in which the stump is unusually thick.

A NEW METHOD OF MAKING SPONGE-TENTS ASEPTIC, by Dr Ernst Fraenkel, No. 32, *Centralblatt für Gynäkologie*, 1882.—In this contribution the author, after briefly referring to the advantages possessed by sponge tents over tangle or tupelo tents, provided their greater tendency to sepsis could be obviated, draws attention to a method of rendering sponge aseptic proposed by Dr A. H. Smith, Philadelphia. This consisted in first covering the sponge with a thin film of soap, and then rolling it in finely powdered salicylic acid. Instead of the salicylic acid the author proposes to use iodoform, which has proved very satisfactory in certain cases. He first rubs the tent with salicylic wool, and then rolls it about in coarsely powdered iodoform until the entire tent is thickly and equably covered with a layer of the iodoform. The tent is then introduced into the cervix, and the upper part of the vagina is carefully packed with iodoform gauze. In addition to these precautions, however, the author insists upon the most careful disinfection of the hands of the operator, all instruments and other things used in the cases.

A CASE OF TOTAL EXTIRPATION OF THE COMPLETELY PROLAPSED UTERUS, by Dr A. Martin, Berlin, is recorded in the same number of the *Centralblatt* by Dr Dävelius. The case presents some points of great interest. The patient had been previously treated by pessaries, and had had the hypertrophied cervix amputated and colporraphy performed without advantage. As the prolapse with all its troubles returned, Dr A. Martin finally resolved to attempt relief by another colporraphy. But on commencing to operate he found that the adhesions of the prolapsed retroverted uterus were so great that he could not hope to push it up in position and retain it there. Accordingly he proceeded to remove the entire organ. Disinfection of the prolapsed parts was effected with a 5 per cent. solution of carbolic acid, whilst the field of operation was kept constantly aseptic by a stream of a carbolic acid lotion 2·5 per cent. strength being made to play on it during operation. The stump of the cervix was first dissected out, and a number of small arteries which spurted were secured by forceps. To restrain the hæmorrhage in the succeeding part of the operation a gum elastic constrictor tube was tied round the base of the tumour, the uterus being forcibly drawn forwards for the purpose. The space of Douglas was then reached and opened into high up above the level of the inner os of the retroflected uterus. The adhesions were partly cut with knife and scissors, partly torn asunder. In a similar manner the uterus was dissected off the bladder and its other attachments, until finally there only remained the tubes and the vessels accompanying them. These connections were first secured in three ligatures and then cut across. After this the peritonæum was sewed to the vagina by deep and superficial sutures passed circularly round, and the stump with its included vessels so secured in the stitching that it came to lie extra-peritoneally. Only on the anterior wall of the vagina, where a deep ulcerated surface existed, the result of the use of a vaginal pessary, were longitudinal stitches needed. The gum elastic tube was now removed, and the bleeding was found to be so thoroughly controlled by the sutures that only a few superficial stitches were needed to secure complete arrest of hæmorrhage. There was at first some peritonitis and fever, but on the eighth day the patient began to mend, and ultimately did well. Dr Dävelius insists particularly on the importance of controlling the hæmorrhage in such an operation by an elastic band. He refers to other five cases in which the prolapsed non-malignant uterus is reported to have been removed. These cases were operated on by Ebbhardt, Jörgensen, Kehrer, Kaltenbach, and Hahn respectively.

ON A MODIFIED PROCEDURE IN THE OPERATION OF CÆSAREAN SECTION, by Kehrer of Heidelberg, *Archiv für Gynäkologie*, Bd. xix. Hft. 2; *Centralblatt für Gynäkologie*, No. 33, 1882.—In this paper the author, after referring to the various methods recommended in the performance of this operation, including Porro's method, states that the results of them all hitherto, notwithstanding the antiseptic system, are extremely unsatisfactory. He then formulates under three heads the objects required to render the operation as successful as possible. 1st, Section of the uterine muscle at the spot where it is least inclined to gape. 2nd, A reliable method of suture. 3rd, The strictest antiseptic measures during the operation, with removal and disinfection of the peritoneal exudations and of the lochia after the operation. To secure the first point, Kehrer recommends to make the incision transversely in the anterior circumference of the inner os, which is, on an average, a centimetre above the bottom of the vesico-uterine pouch. The tendency to gape is here very little, and it is further opposed in a powerful manner by the normal position of anteversion after delivery during the childbed period. In favour of this position for the incision, the author urges further that in this situation the placenta is rarely met with, whilst the head usually lies there, and thus early breathing of the fœtus is facilitated. In regard to sutures, Kehrer recommends the adoption of a double suture—one deep uniting the muscular wall, and one superficial to secure coaptation of the peritoneal surfaces. As to the third, the strictest antiseptic arrangements are employed both before and during the operation. The vagina is thoroughly disinfected before the operation, the interior of the uterus is also thoroughly irrigated by a carbolic solution and rubbed with a carbolized sponge, whilst the peritoneal cavity is scrupulously cleansed. For maintaining subsequent drainage Kehrer expresses himself in favour of several drainage-tubes for the peritoneal cavity, but opposed to carrying a single drain through the abdominal wound, uterus, and vagina. The drainage-tubes should be so disposed that two small tubes should lie on the two sides of the vesico-uterine pouch, and a third, larger and longer, pass over the uterus into the pouch of Douglas. The paper ends with the records of two cases, one of which recovered, the child's life being saved also. In the second case the patient died. Both cases were for high deformity due to osteomalacia.

TWENTY CASES OF OVARIAN CYSTS TREATED BY ELECTROLYSIS, by Frederic Semeleder, M.D., City of Mexico, *American Journal of Obstetrics*, July 1882.—In this paper the author claims to have completely cured twelve out of sixteen undoubted ovarian or parovarian cysts by electrolysis; of the other four, one was permanently improved, the other temporarily so. In two cases no perceptible effect was observed from the treatment. Of the four other cases included in the twenty, the author states that two were cysto-fibroma, and were improved by his treatment; whilst two which were ovarian, for accidental causes, had really no adequate electrolytic treatment applied. The number of sittings varied from 6 to 103; the time required to complete the cure, from one to nine months. The sittings lasted from five to ten minutes, and were commonly daily. The method employed by Dr Semeleder is as follows:—He uses a Calland's battery of twelve elements of zinc and copper. The surface of the zinc elements is 2960 square centimetres. The liquid used is water in which crystallized sulphate of copper is dissolved. The elements are disposed to form a chain. He has in different cases used from four to twelve elements of the said battery, and generally introduces one needle. The needles are made of steel, and are about the size of common knitting-needles, the points being like those of a pin. Platinum needles were found to be too soft and to bend too readily. He prefers to connect the positive pole with the needle, and apply the negative to a distant place of the cyst, so as to secure the passage of the current through a greater part of the cyst contents. The negative pole is applied with a carbon electrode, a sponge, a metal electrode with wet blotting-paper beneath, indifferently. Occasionally slight bleeding or oozing of cyst contents followed removal of the needle. The author has tried external electrolysis, and also the faradic current. In regard to them he says he in no case perceived any remarkable benefit. But he confesses he did not give either a fair trial, as he was unwilling to dis-courage his patients by subjecting them to a treatment in which he had not entire confidence. He believes the chemical effects of the current to be essential to success.

In the same journal Professor Schröder of Berlin contributes a critical paper, entitled, "ON THE RELATION OF LATERAL CERVICAL LACERATIONS TO CATARRH OF THE CERVIX UTERI AND THE NECESSITY FOR EMMET'S OPERATION."—In this article Schröder, in discussing the relation between cervical catarrh and cervical lacerations, maintains that catarrh of the cervix is more frequently the cause of defective healing in cases of lateral tears of the cervix than the effect of these tears. In doing so he refers to the frequency of cervical catarrh, and mentions incidentally his well-known views regarding retained cervical secretion as a means of inducing dilatation of the upper part of the cervix. He does not think that Emmet's operation, even with careful preparation, will cure cervical catarrh. He accordingly is led to the conclusion that in the greater proportion of cases the catarrh is the more important element, and, in consequence of the extreme persistence of cervical catarrh, suggests as the best means of remedying it in cases of torn cervix, to depress the uterus, cut the cicatrices deeply with scissors on both sides, then join these lateral incisions by a transverse incision near the internal os, and complete the procedure by cutting out the wedge-shaped portion of diseased mucous membrane thus delimited from both the exterior and posterior lips. The entire mucous membrane and a portion of the underlying cervical tissue must be removed in order to enable the stitches to hold. Having thus removed the entire mucous membrane from the cervix, with the exception of a portion immediately below the internal os uteri, he doubles up the cervix upon itself, and secures it in that position by sutures. In this way a short gaping cervix is formed, in which only a very small portion is lined with the natural single-layer cylindrical epithelium, the lower part being covered with the flattened epithelium which is the natural covering of the outer surface of the cervix. If it seems necessary, Schröder unites the torn surfaces at the sides by suture also, so as to unite the torn parts at the same time. This rather formidable operation Professor Schröder declares he finds easy of performance and certain to succeed. The sutures are carefully removed at the end of ten days. In fine, Schröder expresses himself as of opinion that only in cervical lacerations without catarrh is Emmet's operation indicated, whenever troublesome symptoms appear which are referable to the lacerations. In these, as he believes, unfortunately rare cases, it is a beneficial, at times almost magically effective operation, and a very important advance in operative gynæcology, always to be linked with the name of Emmet. But in co-existing cervical catarrh the latter is of the greater importance; and in these cases it is better, instead of first treating the catarrh and then repairing the lacerations, to excise the morbid mucous membrane and to unite the lacerations simultaneously by *one* operation.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

THE OLEO-RESIN OF MALE FERN.—According to E. Dieterich, the oleo-resin should be administered in conjunction with castor-oil. The object is to bring the extract, in an unaltered or undigested condition, in contact with the worm. The experiments which have been made by mixing one part of the oleo-resin with two parts of castor-oil have been very successful, and this mode of administration deserves, therefore, the preference. Oleo-resin of male fern is apt to derange the stomach, and when enveloped partly in the oil is likely to pass it more rapidly, which constitutes another advantage. The mixture, it is true, has an unpleasant taste. This may, however, be disguised by filling it in capsules of about 45 grains each. The dose may be regulated from six capsules (equal to 90 grains of the oleo-resin and 180 grains of castor-oil) to seven or eight more, according to circumstances. It is advisable to empty the bowels on the preceding day by a mild purgative, best by castor-oil.—*New Remedies*, July 1882.

PAPAW IN THE TREATMENT OF CHRONIC ECZEMA.—Mr Malcolm Morris, London, in the *British Medical Journal* for 20th May, recommends "papaine," the partially purified extract obtained from the papaw tree, for chronic eczema. This substance has been used for dissolving the false membrane of diphtheria, and is used in the West Indies and Brazil for softening tough meat. Mr Morris states that his patient was suffering from severe chronic eczema of both palms, which completely resisted the external use of tar and mercury ointments of various kinds and strengths, as well as a six months' course of arsenic, and was only slightly relieved by prolonged soaking. On 18th April he ordered 12 grains of papaine and 5 grains of powdered borax in 2 drachms of distilled water to be painted on the part twice daily. When seen on 9th May the hard, horny masses of heaped-up epidermis which were present on 18th April had entirely disappeared from the skin covering the heads of the metacarpal bones, leaving its texture quite normal. The fissures of the central portion of the palms had quite healed, and the cuticle was softened and pliable, though still showing signs of roughness. The patient stated that the application produced only a slight pricking and tingling sensation. No internal remedies were given. The borax was added with the view of checking fermentation and supplying the alkali required in order to obtain the full action of the drug. In some other cases of chronic eczema and psoriasis the same benefit followed in as short time as in the case above mentioned.

TINCTURE OF IODINE IN THE TREATMENT OF ERYSIPELAS.—Dr T. A. G. Balfour of this city, in the *British Medical Journal* for 26th August, adds his testimony to the value of tincture of iodine as an external agent in the treatment of erysipelas. He says, "The patient was suffering from an ordinary smart attack of idiopathic erysipelas of the face, for which I had prescribed the usual full doses of steel to be taken internally, and collodion to be applied to the affected part. At my next visit I found the patient's face considerably more swollen and painful, and presenting a brown appearance. On inquiry I learnt that, by mistake, tincture of iodine had been used instead of collodion; but my annoyance was only equalled by my delight on finding that the symptoms very speedily subsided, and that such a rapid and complete cure of the disease I had never before witnessed."

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

FATAL OTITIS (Paper read before the Philadelphia County Medical Society by Dr G. C. Harlan).—Sarah G., aged 4, of delicate constitution, had measles two years ago, and the discharge from both ears has been almost constant ever since. She received a blow on the left ear four months ago, and since then the discharge has been more copious from that ear, and the pain has been constant and frequently very severe. There has been no discharge for some weeks from the right ear. As the child was very nervous and restless, a thorough examination was not made of the ear till five days following November 11th. At that time it was noticed that there was facial paralysis, the face being drawn to the right side. Ether given, and several polypi filling the canal were removed with forceps. Posterior and upper wall of meatus eroded, membrane destroyed, and ossicula exposed. November 13th.—Child has slept much better since the operation, and her general appearance has improved; the facial paralysis more marked. Four days later seized with intense headache. Temperature 102° F.; no pain in the ear. November 28th.—During the intervening time her condition has been about the same; intense headache, high fever, very quiet when kept in mother's lap, but at other times restless; has been conscious all the time till to-day, when she became comatose, and died in an hour afterward. *Post-mortem.*—Cerebral membranes congested. The cerebrum was removed, and the tentorium beneath found bulging on the left side, and beneath it was found an abscess of the cerebellum containing about half an ounce of pus and clotted blood, the pia mater covering it partly destroyed, and the rest covered with lymph. The situation of the abscess was directly over the entrance of the internal auditory meatus. The edges of the dura mater at the entrance of the meatus were bared and covered with greenish pus. The remainder of the brain and membranes healthy. There was almost entire destruction of the anterior wall of the external meatus; posterior portion bare and eroded; membrana tympani destroyed, while the inner wall and floor of the tympanum were bare; thickening of mucous membrane about the entrance of the Eustachian tube; partial erosion of the malleus and incus, while stapes had disappeared; fenestræ rotunda and ovalis uncovered; perforation in anterior edge of jugular fossa, and floor of tympanum very thin. The facial and auditory nerves were diseased, and, when removed, walls of meatus were found bare throughout.—*Philadelphia Medical Times*, 27th August 1881.

CASE OF MASTOID ABSCESS WHICH RUPTURED INTO THE LATERAL SINUS; DEATH FROM PYÆMIA.—Charles H., aged 31, had always been a strong and able-bodied man, but inherited a tendency to consumption. He had been subject at times to a chronic purulent discharge from one ear. In the spring of 1881 he had a severe attack of pharyngitis, with pain in the right side of the head. He had received treatment at various times for his ear disease, and lately had been in the hands of an irregular specialist. During the early part of November he had suffered from earache and headache on the right side, but he remained at work till the 10th. November 11th, he was seized with a severe chill. It was evident that he was suffering from blood-poisoning, as the chills became irregular and were followed by high fever. There was marked pain in the right temporal region and over the eye, but the mastoid portion did not seem to be affected—there was no pain nor swelling there. The discharge from the ear consisted of thin purulent matter. It was then supposed that there had been an abscess of the mastoid cells, which had ruptured internally in the cranium. All symptoms, however, about the mastoid disappeared in about ten days, and in their place the liver and lungs became affected. The cough was troublesome, with considerable expectoration of muco-pus and blood. The liver appeared to be enlarged. Jaundice set in, and the urine was loaded with bile. Abscess of the liver was then suspected. *Autopsy.*—The spleen was greatly enlarged; kidneys large and anæmic; lungs congested and œdematous, and some pleurisy existed. The liver was slightly enlarged, and there were pyæmic infarctions in the various organs. The brain membranes were normal, as well as the cerebrum and cerebellum, except that a small abscess one centimetre in diameter was formed in the anterior lobe of the left hemisphere of the cerebrum, at the border of the white substance. There was marked discoloration of the dura mater covering the petrous portion of the right temporal bone, and beneath the membrane the bone was carious, and an abscess communicated by a free opening with the lateral sinus, which was filled with pus and clotted blood.—D. W. Prentiss, A.M., M.D., *American Journal of Medical Sciences*, May 1882.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

THE TREATMENT OF SYPHILIS BY SUBCUTANEOUS INJECTION OF MERCURIAL SALTS.—Letnik believes that the time is not far distant when all other modes of treating syphilis will be displaced by the subcutaneous injection of mercury. In the cases of prostitutes, who frequently, in hospital, refuse to submit to the ordinary course of treatment, this method of administering the remedy is almost indispensable. Its advantages are stated as follows:—1. The dose may be more nicely graduated. 2. Baths and frequent changes of linen are dispensed with in the treatment of the poor. 3. The rapid disappearance of fresh syphilitic symptoms, often after only six or eight injections. 4. The patient will possibly be able to continue his usual occupation. 5. The whole course of treatment is shortened. Taking the results of various authors in 1892 cases (during 5 years), Letnik finds that the average duration of various modes of treatment is as follows:—*α*. Internal treatment, 78⅓ days. *β*. Inunction course, 56 days. *γ*. Subcutaneous injection course, 32 days—the length of the latter course of treatment being less than half that in which the remedy is given by the mouth. 6. Stomatitis is remarkably rare. 7. The general health is improved rather than injured, although no change is made in the diet. Letnik has treated thus 210 cases. The treatment was abandoned only five times, three times in much reduced patients, in whom severe nervous symptoms were observed after each injection, and twice in cases of rupia syphilit., where no benefit was obtained. Whilst 172 patients exhibited the malady under the form of exanthemata or condylomata, 32 were suffering from advanced syphilis. The number of injections in any one case varied from 20 (minimum) to 45 (maximum). The salts employed were chloride of mercury with sodium chloride, corrosive sublimate ($HgCl_2$) with morphia, and bicyanide of mercury. The pain produced by the first-named solution lasted about 15 minutes, while that caused by the others remained for half an hour. The local induration after injection of the mercury-sodium salt lasted at most 5 or 6 days, that after the cyanide 20 days or more. No experiments with mercury albuminate and its allies were made (L. M. Letnik, Wratsch).—A. Schmidt, in *Centralblatt für Chirurgie.*

SYNOVITE TENDINENSE À GRAINS RIZIFORMES; INCISION; TRAITEMENT ANTISEPTIQUE; GUÉRSION.—This case is interesting on account of the duration (6 years) and extent of the disease. The synovitis commenced in the sheath of the flexor pollicis tendon, spread to that of the flexor communis digitorum, and at last involved the sheath of the extensors. The patient, a postillion aged 57, could no longer use his hand. The dorsal and volar sacs were opened by an incision 1½ inches long in each case, under antiseptic precautions. Both sacs contained a quantity of rice-like bodies, but very little synovial fluid. A number of these grains were found firmly attached to the surface of the membrane, which in the remainder of its extent was perfectly smooth and free from exudation. One of the extensor tendons had become broken up into fine parallel fibrous bands, between which a number of the smaller rice-grains were entangled. The cavities were washed out with a 5 per cent. carbolic acid solution, drainage established, and a Lister's dressing applied. The case was well in 14 days, the usefulness of the hand being considerably increased. Nicaise remarks that there are two views as to the origin of the rice-grains. Velpeau holds that they are the result of a fibrinous exudation into the sheath; while Virchow regards them as true vegetations. Nicaise operated some time ago on a case that seemed to support Velpeau's theory, but the present instance seems rather to favour Virchow's hypothesis. Microscopically the bodies were found destitute of connective tissue. They consisted of an amorphous pulverizable matrix containing a few scattered cells of indefinite character, perhaps white blood-corpuscles. Boiled for an hour in distilled water at 120° C., they gave no gelatine and were quite insoluble. Chemical examination showed that they consisted of an albuminous mass; and Nicaise considers it proved that they are not the results of a proliferation of the sheath. Desprès considers that these cures are only apparent, in a year all will be as bad as ever, and that there is but one cure for mucous cysts, viz., suppuration. On the other hand, Lucas Championnière asks why washing out with a strong carbolic solution should not succeed here, when its use in cases of hydrocele and hydarthrosis is so often successful (Nicaise, *Bull. et Mém. de la Société de Chirurg. de Paris*).—Walzberg, in *Centralblatt für Chirurgie*.

A NOTE ON THE RECTAL EXAMINATION OF PATIENTS SUFFERING FROM VESICAL CALCULUS.—The value of rectal bimanual examination in the cases of children suffering from calculus is very generally recognised. The examination is made under chloroform, the abdominal walls being quite lax, and the bladder empty or almost so. Two fingers of the left hand are passed as high as possible into the rectum, while externally the right hand above the symphysis presses the bladder downwards till the one hand is clearly felt by the other. In this way the entire bladder of a child can be easily palpated, and even stones of small size immediately discovered. Some practice is required at first in forming a correct idea of the size of the stone, even when the latter can be freely moved in all directions. I found that I had generally under-estimated the actual size of the calculus. Lately I have discovered a method by which the dimensions of the concretion, in children, may be more certainly gauged by direct palpation. The fingers of the left hand in the rectum raise the stone, whilst those of the right (externally) guide it to the pubes and fix it there. The stone may then be completely grasped, and the bystanders may easily take it in hand one after another. If the stone be not too large, it would be possible to raise it so far that a string might be passed around it; not that I mention this in order to recommend the elastic ligature as a method of performing lithotomy, but because it is conceivable that use might be made of such a mode of treatment in the case of vesical growths where the tumour has a long pedicle (papillomata, myomata). In my four last cases of stone in children I succeeded perfectly in "dislocating" the calculus on to the pubes, and in grasping it there with the fingers. One was the size of a horse-chestnut. In adults, probably, the manœuvre will only succeed in exceptional cases, where the body and abdominal walls are very thin.—R. Volkmann, in *Centralblatt für Chirurgie.*

EXPERIMENTAL RESEARCHES ON THE EFFECTS OF PUERPERAL SECRETIONS ON THE ANIMAL ORGANISM.—Karewsky has made a number of careful inoculation experiments with puerperal secretions, the results of which are of general as well as of obstetric interest. In all lochial discharges the majority of bacteria are spheroidal bodies of very considerable size. In putrid lochia the bacteria are increased in numbers, but unaltered in shape. The following are Karewsky's conclusions:—1. All lochia, normal as well as septic, are able to produce septicæmic and ichorhæmic disease in animals. 2. The virulence of the discharge increases with the duration of the puerperium, and during puerperal diseases. 3. When symptoms of septicæmia appeared, a spheroidal fungus was found in the organs of all the affected animals. 4. Diseases produced in this way are communicable to healthy animals. The fungus, derived undoubtedly from the adjacent air, finds in the genital tract an extremely favourable seat for further development. The inoculated cases differed from each other only in degree. The globular micrococcus found in all the cases is evidently the *materies morbi*, although, of course, it is not a specific "*micrococcus puerperalis*" (Karewsky, in *Zeitschr. f. Geb. u. Gynäk*).—F. Benike, in *Centralblatt für Chirurgie.*

THE TREATMENT OF FOREIGN BODIES IN THE AIR-PASSAGES (by J. R. Weist, M.D., Richmond, Ind., in the *American Practitioner;* and by Louis Elsberg, A.M., M.D., New York, in *Philadelphia Medical Times*).—Dr Weist in his paper questions the correctness of the present opinion prevailing among surgeons, that, as a general rule, the certainty of the presence of a foreign body in the air-passages makes bronchotomy necessary. He has collected statistics of 1000 cases, 897 of which have not been previously published, and from a consideration of these comes to the conclusion that the presence of a foreign body in the larynx, trachea, or bronchi does not make bronchotomy necessary, that while it causes no dangerous symptoms or remains fixed an operation should not be performed. Of the 1000 cases, in 63 the foreign body was removed by operative measures other than bronchotomy—*e.g.*, with forceps, either with or without the aid of the laryngoscope, etc. These are excluded in calculating the chances of recovery afforded by bronchotomy compared with those following the plan of non-interference. There remain 937 cases: of these, 599 were not subjected to bronchotomy; 460 recovered, or 76·79 per cent.; 139 died, or 23·20 per cent. Bronchotomy was performed in 338 cases, with 245 recoveries, or 72·48 per cent.; 93 patients died, or 27·42 per cent.—a difference in favour of non-interference of 4·31 per cent. Dr Weist is not, however, seeking to bring bronchotomy into discredit in cases of foreign bodies in the air-passages. In a large number of cases the larynx or the trachea, he insists, must be opened to save life, and the surgeon who fails to urge the necessity of prompt operation will be neglectful of his duty. He is only striving to show that the present accepted rule is too broad, that in many cases, when it is certainly known that the trachea or bronchi contain a foreign body, the patient will be more likely to recover if trusted to the chance of spontaneous expulsion than he will if subjected to operation. If this teaching be accepted, it will be important to determine in what cases bronchotomy should be performed and in what cases avoided. When the nature of the foreign body is known, the propriety of an operation can be more easily determined than when it is not, as it is apparently settled that certain substances are much more likely to be expelled spontaneously than others. From the tables Dr Weist gives it would appear that seeds of various kinds, particularly water-melon seeds, are the chief among those bodies that are likely to be expelled spontaneously. In cases where the foreign body is impacted in a bronchus, Dr Weist thinks bronchotomy should not be performed; but wherever the body is loose and is causing grave symptoms there operation must be done and at once. Dr Elsberg gives six maxims for the treatment of cases of foreign bodies in the air-passages. These are—(1.) A person with a foreign body in the air-passages should never be left without medical care; (2.) Medicinal treatment is in most cases insufficent, emetics are dangerous; (3.) Expert laryngoscopal procedure for removal should be had whenever possible; (4.) Prophylactic tracheotomy should be performed at the slightest indication in every case in which immediate removal is impossible; (5.) Procedures dangerous and often unsuccessful before tracheotomy can, if need be, safely be resorted to, and with increased chances of success, after; (6.) For impacted foreign bodies which cannot be removed *per vias naturales*, if not lower down than the superior laryngeal cavity, "subhyoidean pharyngotomy," and, if lower down, either high or low tracheotomy, instead of thyrotomy, are the preferable operations for extraction. The operation of "subhyoidean pharyngotomy" was described by

Dr Elsberg in 1864, at a time when the account of but a single case had been published; it had, however, been previously described and highly recommended. Since then Dr Elsberg has performed it three times, once for removal of a morbid growth, and twice for removal of impacted foreign bodies. It consists in an incision along and parallel to the lower edge of the hyoid bone, through the skin and subcutaneous tissue, the fascia and fibres of the platysma myoides, the inner portion of the sterno-hyoid and hyo thyroid muscles, the hyo-thyroid membrane, and the mucous membrane between the root of the tongue and the epiglottis, special care being taken not to cut the epiglottis. On seizing the epiglottis and turning it forward or drawing it out of the wound, there is nothing to prevent our inspecting or operating in the larynx. Dr Elsberg prefers this operation to dividing the thyroid cartilage in order to the removal of a body impacted in the ventricles of the larynx, and regards it as a very successful mode of treatment.

THE CAUSE OF SICK HEADACHE.—Dr Savage, of Jackson, Tenn. (in *The Medical and Surgical Reporter*), announces that he has discovered the real cause of sick headache to be hypermetropia and astigmatism, either alone or combined, and that its successful treatment consequently consists in the use of a properly fitted glass. In support of his views he gives a detailed account of four cases occurring in the persons of his mother, his sister, his preceptor, and himself. His mother had long suffered from sick headache, but as she grew older the attacks became less frequent, and at the age of 58 she became entirely free of them. At the same time she noticed that her vision for distant objects was failing. Dr Savage examined her, and found that her once latent hypermetropia had been converted by loss of power in her ciliary muscle into a wholly manifest hypermetropia. The question occurred to him, could not her far-sightedness have been the predisposing cause of her sick headache, and would not the simple glasses he was then able to give her have transformed her years of suffering into years of ease? He was a sufferer himself. *Fiat experimentum in corpore vili.* In the latter part of March of this year premonitory symptoms of an attack of sick headache appeared. Instead of taking his accustomed dose of chloride of sodium, he put three or four drops of a one per cent. solution of atropia into his left eye, the headache being confined to that side. In half an hour his ciliary muscle was at rest, he was free from pain, and had no inclination to vomit, as on former occasions. He was happy, and felt inclined to cry out "*Eureka.*" The atropia had relieved the tension of his ciliary muscle, putting it to rest, and thus relieving its pain; and there being no further cause for sympathy on the part of the head and stomach, the pain and nausea ceased. His vision, perfect before, was now, however, equal to $\frac{20}{100}$. Both hypermetropia and astigmatism, he found, existed in his eye, so that, to overcome the defect, he required a combination of a convex spherical lens of forty-two inches focal distance and a convex cylindrical of sixty inches focal distance, with its axis set at an angle of 90°. He afterwards found the right eye also hypermetropic and astigmatic, and gave it the proper correction. Since then, with one week's exception, he has done all his reading, etc., with the aid of the glasses. During the week he laid them aside he had a severe attack of sick headache, and does not, in consequence, intend to repeat his folly. In his sister's case the doctor found one eye hypermetropic, the other hypermetropic and astigmatic. The proper glass for each eye was given her, and now her sick headache is a thing of the past. His preceptor he found hypermetropic, and in his case also, after the use of convex lenses, the sick headache disappeared. The predisposition to sick headache, in most persons, ceases between the ages of 50 and 60. Dr Savage offers as an explanation of this that about this time a latent hypermetropia is converted into a manifest hypermetropia, the ciliary muscle that has had to work so hard during so many years being worn out and ceasing its labours, and thus there is no further cause for sympathy on the part of the head and stomach. The periodicity of the attacks he thinks may be explained by the eye's being able to bear for a time the excessive work it is made to do, when at length its distress is made known by an explosive attack of sick headache, the eye and head aching indescribably, and the stomach, through sympathy, so desperately nauseated as to unload itself of its contents. Even before the attack comes on the stomach performs its functions sluggishly, through sympathy for the overworked eye. The exciting cause of the sick headache, he is of opinion, is always to be found in the over-use of a hypermetropic or astigmatic eye.

Part Fifth.

MEDICAL NEWS.

Royal College of Physicians, Edinburgh.—The following gentlemen passed their final examination for the qualification in Medicine in August 1882, and were admitted L.R.C.P. Ed.:—Henry Arthur Lownds, Surrey; Robert Hugh Hodgson, London; Robert Marshall Elliott, Clinton, Canada; James John Hucs, Birmingham.

The Northern Sanitary Association (Liverpool).—This association has now practically commenced its career. At a recent meeting of the executive committee, Mr Fleeming Jenkin, M. Inst. C.E., professor of civil egineering in the University of Edinburgh, and consulting engineer to the Sanitary Protection Associations of Edinburgh and London, was appointed consulting engineer. Mr Coard S. Pain, engineering surveyor of this city, acts as resident engineer; and the secretaryship and treasurership is placed in the hands of Mr J. S. Harmood Banner.

THE "STUDENT'S CABINET OF MATERIA MEDICA," specially prepared for Materia Medica Examinations: Edinburgh: Young J. Pentland.—This cabinet professes to be "a collection of all the important substances of the organic Materia Medica," and we have much pleasure in bringing it under the notice of students. The specimens are, on the whole, carefully selected, beautifully prepared, and accurately named. The cabinet contains some specimens not officinal in the *British Pharmacopœia.* Mr Pentland has rendered a valuable service to students of Materia Medica by means of this cabinet, and we believe that by adopting some improvements he will render his cabinet still more beneficial to the student; and we would point out for Mr Pentland's consideration some suggestions. We would recommend that the names of the specimens be those of the *British Pharmacopœia*, and not, as in several cases, the misleading names of chemists—for example, Areca *nux* for Areca; Cardamomi *semina*, Fœniculis *semina:* in these two the parts officinal are the fruits, and not the seeds. In all cases we would recommend that the specimens be compared with the descriptions given in the *British Pharmacopœia.* This would prevent the misnaming of a few of the specimens—as Rosæ centifoliæ petala, which are evidently the petals of the *red rose*, Rosa gallica. Buchu crenulata is evidently B. serratifolia. Guaiaci lignum conveys to the student no proper idea of that wood, and Sabadilla as shown in the cabinet is the seed, and not the *fruit*, of the *British Pharmacopœia.* In like manner the specimen of Nectandri cortex would not enable the student to recognise a proper specimen of that drug. The specimen named "Granati cortex" is evidently the rind of the fruit, which is not officinal, the officinal part being the bark of the *root*, Granati radicis cortex of the *British Pharmacopœia*, etc. These are defects which can be easily rectified, and we have no doubt but they will be put right in subsequent cases. Many of the specimens are very fine, and the whole enclosed in a very neat case. The price is exceedingly moderate. It is the best cabinet of Materia Medica for students which we have seen.

LIST of CANDIDATES who were successful for appointments as Surgeons in Her Majesty's British Medical Service, at the Competitive Examination in London on the 21st of August 1882:—

No.	Name.	Marks.	No.	Name.	Marks.
1.	Macpherson, W. G.	2365	9.	Stuart, J. R.	2015
2.	Simpson, R. J. S.	2305	10.	Morse, T. R.	1975
3.	Reid, F. W.	2233	11.	Deeble, W. B. C.	1960
4.	Phipps, E. V. A.	2180	12.	Prendergast, J. M.	1935
5.	Hunter, V. E.	2160	13.	Bond, R. P.	1905
6.	Baird, A.	2155	14.	Stewart, J. M'D.	1890
7.	Hamilton, T. W. O'H.	2055	15.	Thomas, G. T. H.	1870
8.	Semple, D.	2030			

We have received advertisements from William Snowden, surgical instrument maker, Philadelphia, of various instruments, the invention of Dr Levis. The first is an ingenious adaptation of extension apparatus that will fix on any bed; the next is an instrument for performing the operation of circumcision in children by a method which removes a minimum of skin, while the offending mucous membrane is freely excised; the next is a splint moulded so as to receive the forearm and palm of the hand for the treatment of fracture of the lower end of the radius. The treatment is conducted on the principle of extension with flexion of the wrist, and the splint is apparently a good one; only, as it is made of tinned copper, it is too expensive for hospital use. The last instrument is a syringe for injecting carbolic acid into the tunica vaginalis for the cure of hydrocele. Mr Snowden has sent Dr Levis's pamphlet on the treatment of hydrocele by carbolic acid injection. As this is not a perfectly new method of treatment, we need only say that Dr Levis seems so delighted with its success in hydrocele that he has extended its employment to cases of chronic bursitis with satisfactory results. We are not informed of what material the syringe is made.

Toilet Drunkenness.—Dr Groussin has a letter on the curious form of drunkenness which he mildly describes as toilet drunkenness. Those who by birth or fortune, or by a combination of both, belong to what we call the upper classes are subject, like other mortals, to all the faults and vices inherent in our nature; but their respectable position, and the money at their disposal, enable them to throw over their bad habits a veil which the world in general cannot see through, and which even the doctor can hardly raise. A lady whom I have lately attended four times complained of giddiness, headache, difficulty in walking, and a want of accuracy in manual movements. I, fearing an apoplexy, turned all my attention in that direction, prescribed purgatives, mustard foot-baths, bicarbonate of soda to dilute the blood. If I had only prescribed cold water and no other fluid! I found by accident that this lady, otherwise excellent and kind to the poor, got drunk regularly four times a week on eau de Botot. She drank this water instead of using it to wash her mouth, and no one discovered it. Had she drank wine, chartreuse, or cognac, her breath would have betrayed her to the least knowing person. Eau de Cologne and other toilet tinctures are used in some way.—Dr Minime, in *Journal de Médecine de Paris*, 9th September 1882.

Noises for Invalids.—On this particular Sunday morning I own I should have liked to remain an extra half-hour between the sheets. I was constrained, however, to rise by the persistent booming of the church bells. They rang me into nervousness, they rang me into consternation and præcordial anxiety, they rang me into a most irreverent and un-Sunday-like state of exasperation, and they rang me temporarily very nearly mad. There may have been a good many people sick unto death that morning at Baltimore, and the incessant clanging and jangling of the bells may have been as efficacious as the old "Mrs Gamp" pulling the pillow from beneath their heads in order to terminate their sufferings. I suppose that campanology is a science, and I wish its votaries joy of it. I can understand the zeal of the "college youths" and other amateur bell-ringers who ring triple-bob-majors by the ten thousand, because at the conclusion of their labours they are sometimes regaled with a leg of mutton and trimmings for supper; but I do seriously trust that the time has arrived for quiet people all over the world to unite in a protest against the senseless, cruel, and barbarous practice of jangling bells in order to invite the public to attend divine worship. . . . I want to know, in the interest of the sick and nervous, what good these bells do anywhere. Do they render anybody more serious, virtuous, or devout? . . . I recommend the campanological nuisance to the attention of all sensible physicians.—*America Revisited*, by G. A. Sala, vol. i. pp. 119-121. [*Mutato nomine*, what clever, wise Mr Sala writes of Baltimore might be written of the West End of Edinburgh, where, not only on Sundays, but on two or three evenings during the week, conversation is rendered impossible and life made unendurable by the fearful noises proceeding from a so-called peal of bells in a new cathedral spire.—Ed. *E. M. J.*]

A MODERN FABLE.—Some of the eccentricities of modern adulteration are delicately disclosed to the commonwealth of consumers by a contemporary German satirist, in the following neat little fable:—"There were once four flies, and, as it happened, they were hungry one morning. The first settled upon a sausage of singularly appetizing appearance, and made a hearty meal. But he speedily died of intestinal inflammation, for the sausage was adulterated with aniline. The second fly breakfasted upon flour, and forthwith succumbed to contraction of the stomach, owing to the inordinate quantity of alum with which the flour had been adulterated. The third fly was slaking his thirst with the contents of the milk-jug, when violent cramps suddenly convulsed his frame, and he soon gave up the ghost, a victim to chalk adulteration. Seeing this, the fourth fly, muttering to himself, 'The sooner it's over the sooner to sleep,' alighted upon a moistened sheet of paper exhibiting the counterfeit presentment of a death's-head, and the inscription, 'Fly Poison.' Applying the tip of his proboscis to this device, the fourth fly drank to his heart's content, growing more vigorous and cheerful at every mouthful, although expectant of his end. But he did not die. On the contrary, he throve and waxed fat. You see, even the fly-poison was adulterated!"—*New York Medical Record*, August 26, 1882.

OBITUARY.

DR CHARLES MOREHEAD, F.R.C.P., C.I.E.

To many of the profession in Edinburgh the news of the sudden death of Dr Morehead must have come almost as a personal affliction. He has for many years spent his well-earned rest and leisure in Edinburgh, and no one who enjoyed his friendship, or even the most slight acquaintance, could help loving and admiring the polished, courteous gentleman who bore his load of years and honours so calmly and with such modest grace. Only those conversant with the history of medicine and administration in India knew or realized how much the state owed to Dr Morehead, and certainly no one would ever have found it out from himself. His tall, graceful figure and snow-white beard made his bodily presence most remarkable; and though he rather shunned medical gatherings, those of us privileged to know him soon discovered what a store of medical wisdom and knowledge he possessed, and how fully he kept up, not only his information, but his interest in all professional progress. Specially did he remember the Indian schools of medicine, and the Grant Medical College in particular, and our own pages have here and there been enriched by information furnished by him, though, alas! he would not himself write anything in his own name.

Dr Charles Morehead was the second son of the late Reverend Robert Morehead, D.D., once Dean of Edinburgh, and one of the ministers of St Paul's Episcopal Chapel, York Place, and rector of Easington, Yorkshire, who was of the family of Morehead of Herbertshire; and of Margaret, daughter of the Rev. Dr Charles Wilson, Professor of Church History in the University of St Andrews.

His eldest brother, William Ambrose Morehead, rose to the highest position in the Madras Civil Service, and died in Edinburgh, 1st December 1863, one year after his return from India.

Dr Morehead was born in 1807; M.D. Edin., F.R.C.P. London, F.R.S. Edin., and Hon. Surgeon to her Majesty; entered Bombay Medical Service, 1829; became Dep.-Inspector-General of Hospitals, 1857, and retired 1862; served with European and Native Regiments, 1829–1835; was on staff of Sir Robert Grant, Governor of Bombay, 1835–1838; secretary and president of Medical and Physical Society of Bombay, 1835–1859; secretary of Board of Education, 1840–1845; surgeon in European and Native General Hospitals, Bombay, 1838–1857; and Principal and Professor of Medicine, Grant Medical College, 1845–1857; has contributed largely, by his writings, to the science and practice of medicine in India; created Companion of the Order of the Indian Empire, 1881.

He married, 1844, Harriett Anne (who died 1846), daughter of the Ven. George Barnes, D.D., first Archdeacon of Bombay, a fellow-worker with Bishop Heber, and, after his return from India, Archdeacon of Barnstaple, Devon.

Dr Morehead's long and useful career in India centred in his great desire to introduce in the Western Presidency a native medical education, based upon the principles of European medical science. This aim he kept steadily in view, and devoted many years in the prime of life, as well as the best energies of a large and cultivated mind, in a far-seeing, practical, and comprehensive manner, to the attainment of so desirable an object. Whilst in India his interest in general, and especially in medical education never languished, nor did it lapse after his retirement from the service. On the contrary, his ardent solicitude was that his successors might be imbued with a liberal and judicious spirit, and carry out the sound principles which he was the first to inculcate and to uphold. Dr Morehead lived to witness many gratifying results of his unwearied labours, and to receive the gratitude of those who valued his teaching and emulated his example. In the last few years of his life nothing cheered Dr Morehead so much as to hear of the success of those institutions which he originated and fostered, and of the welfare of many former students, who held his name in kindly regard, and will now cherish his memory with affection and veneration.

It was when Dr Morehead was upon the staff of Sir Robert Grant, the Governor of Bombay, that he conceived the idea of a medical college being founded in Bombay, and published his views in the Transactions of the Medical and Physical Society. He designed a college, not in imitation of the Bengal Medical College, intended chiefly for Government servants, but to be devoted to the education of natives for independent medical practice, by affording them sufficient preliminary training, and by instruction through the English language, and thus to ensure a thoroughly practical medical education. These views, so ably planned, were zealously advocated by Sir Robert Grant. After his death a fund was subscribed by his admirers and made over to Government on condition that the College should be established and bear his name.

Grant Medical College was consequently erected as a memorial to Sir Robert Grant, and was opened in May 1845. In close proximity to, and in connexion with the College, a large native hospital was built and endowed, at the joint expense of Government and of Sir Jamsetjee Jehjeebhoy, after whom it was named. The object of uniting these two institutions was to provide a practical means of instruction by a well-arranged system of *clinical* teaching. Dr Morehead became the first Principal of the College, the first Professor of Medicine, and the first physician to the Hospital. He deemed it fortunate to have two able and energetic men—Dr Peet and Dr Giraud—associated with him as his primary colleagues, who not only seconded his efforts, but devoted their best energies to secure and to maintain the prosperity of the College. Each afterwards succeeded as Principal, and many other distinguished medical officers have since presided over the College, whilst the nominal roll of individual professors since that time is a long one. The bust of Dr Morehead is placed in the vestibule of the College, as a memorial of its chief eminent Principal and Professor. The successive annual reports of Grant College testify to the unwearied exertions Dr Morehead bestowed to advance its best interests, and show that *clinical* teaching and *clinical* test examinations were its prominent features, and that at a time long before these practical methods of instruction and examination formed part of the curriculum of examining Boards in the United Kingdom. It is gratifying, therefore, to know that Grant College, thus organized, has run a useful career of more than 35 years, and is now flourishing under efficient administration upon the basis laid down by Dr Morehead.

The Bombay Medical and Physical Society owes its origin to Dr Morehead, who established it for the advancement of medical science and its collateral branches by the publication of Transactions—20 volumes of which are in existence. The Society flourished for upwards of 30 years, but not very long ago ceased to exist, to Dr Morehead's great regret, who at the distance of England tried to rekindle an interest in its affairs amongst the members of the Bombay Medical Service. Dr Morehead's contributions were many and valuable, culled from his ripened experience and study of interesting cases falling under his observation in hospital and in private practice. Thus was laid the commencement of his future elaborate work, *Researches on the Diseases of India*, which passed through two editions, and is considered a standard authority on all Indian diseases.

Another medical society Dr Morehead organized within the walls of Grant College, designed as a bond of union amongst former students when they had become practitioners of medicine. Dr Morehead maintained that "it was essential that there should be exhibited to the people at large a class of persons not only remarkable for the possession of medical knowledge, but distinguished by zealous and continued perseverance in the pursuit of it, by honourable, high-minded conduct, and by union and good feeling amongst themselves." Of late years scarcely a mail arrived from Bombay, without some intelligence or proceedings of the Grant College Medical Society having been forwarded to Dr Morehead, who viewed with satisfaction the firm hold taken by the Society, and how much the spirit of former times and of teachers was reflected, not only in its respected President (Mr Lisboa), but amongst its members generally.

These three institutions, entwined as they were with each other, were the very mainstay of Dr Morehead's ambition, the pivot upon which his aspirations centred and turned. Those who are or who have been connected with them cannot let a great and honoured name pass away without an expression of their esteem for and gratitude to the pioneer of medical education in Western India, or without acknowledging that Dr Morehead achieved a great and noble work, and thus became a true benefactor to the people of India.

One of Dr Morehead's original colleagues, and the only one now living (Dr Giraud), recorded in the twelfth annual report of Grant College the following graceful tribute to Dr Morehead's loss, on his retirement from the College:—

"Although Dr Morehead's official connexion with the College has not absolutely ceased, yet we cannot hide from ourselves the extreme improbability of his ever again presiding within these walls. And when it is remembered that to his exertions, under the approving eye of the enlightened statesman whose name it bears, this College owes its very existence, that under his wise and cautious yet liberal and practical management it has grown into so complete an institution that it may well challenge comparison with the medical schools of Europe, it will be seen that his removal to another sphere of duty is an event which could not be lightly passed over in silence, especially by one who counts it amongst the greatest privileges of his life to have been so many years associated with him, and who, in common with every professor and every student, has found his sagacious, kind, and willing counsel and his bright and active example a sure and safe guide in difficulty, and an ever present stimulus to exertion. But any expression here recorded of the veneration and esteem in which we have held our Principal are utterly inadequate to represent the depth of our grateful feelings."

DR WILLIAM ROBERTSON, F.R.C.P. Ed., F.R.S.E.

We have with much regret to record the death of this learned physician and amiable man, which occurred on 25th August. He was born in Edinburgh in 1818, was the son of the late Mr George Robertson, Deputy Keeper of the Records in the General Register House, an office which had been held by successive members of the Robertson family for over a century, beginning with his grandfather and ending with his brother Mr George Brown Robertson, who died in 1873. On his mother's side he was descended from a well-known Elginshire family of Browns, the distinguished Crimean hero Sir George Brown being his maternal uncle. Dr Robertson received his earlier education at the Edinburgh Academy, where he distinguished himself by the excellent place which he took in all his classes, but especially in mathematics, a department of science which he especially liked, and which he continued to cultivate to his last days. He studied medicine at the University of Edinburgh, graduated there in 1839, his thesis being on Enlargement of the Heart, under which very disease he laboured before his death. After his graduation he studied at Berlin, Vienna, and Paris, bringing with him a large store of practical knowledge and a confirmation of those linguistic accomplishments which had characterized him as a youth. Returning to Edinburgh, he began, as so many of the leading medical men of Edinburgh have done, by getting appointed as one of the medical officers of the New Town Dispensary, and there acquired a large amount of practical experience. He was appointed a junior ordinary physician to the Royal Infirmary on Nov. 10, 1845; third ordinary physician, May 18, 1846; and senior ordinary physician, Oct. 10, 1853. He finally resigned this appointment on April 23, 1855.

So well was he known as a thoroughly practical man, that in 1856, on the outbreak of the Crimean war, when it was determined to establish convalescent hospitals under civil practitioners to relieve the Army Medical Department, he was recommended by the late Sir Robert Christison for employment in this sphere of work, and was appointed Inspecting Physician to the British Civil Hospital, Renkioi, and at this place and elsewhere he continued in Government employment for eighteen months. His letters from these distant places, addressed solely to his relatives and intimate friends, were full of that genial humour and descriptive faculty which were characteristic of the man. While holding the office of Ordinary Physician in the Royal Infirmary, as noted above, his work in the hospital was characterized by the most thorough conscientiousness and accuracy, and there was probably no one connected with that noble institution at his time who was the superior of Dr Robertson in diagnostic skill. In the matter of therapeutics he was thoroughly alive to all that was fresh in the practice of medicine, whilst his practice was much upon the old lines, and was marked by the important qualities of carefulness and common sense.

Dr Robertson's general acquirements, his full professional knowledge, and genial disposition seemed to mark him out as one well qualified for professional literary work; and accordingly, when this Journal was under the conduct of a fraternity comprising Christison, Syme, Simpson, Bennett, and Maclagan, he was chosen as responsible editor, and discharged the duties of the office with the full approbation of the conductors and readers of the Journal.

Dr Robertson had a large experience in the important department of life insurance. He was first the local medical referee of the Guardian, then was appointed medical officer of the Scottish Equitable, and on the death of Dr Warburton Begbie was chosen as medical officer of the Scottish Widows' Fund. This appointment he held till his death. His opinions on insurance cases were always marked by his great shrewdness and professional knowledge. Another and most important office which he held was that of Superintendent of Statistics in the Registrar-General's Department, Scotland. The amount of accurate and useful work which he did in this department can hardly be overestimated: much of it will not be known till the full reports of the census of 1881 are printed. It is a rare thing for a physician to combine in himself the practical acquirements and statistical and mathematical knowledge which marked the subject of this memoir.

The personal character of Dr William Robertson was in all respects excellent. As in the case of many worthy members of our profession, "even his frailties leaned to virtue's side;" and one of these frailties, if so it may be termed, was a shy, retiring, and unobtrusive manner, which doubtless hindered him from taking that prominent place as a practitioner which all his friends expected he would some day vindicate for himself, and for which his thorough professional knowledge eminently fitted him. What he might have done but for this phase of character was shown by his pre-eminent success in the departments of life assurance and medical statistics. He was in every way a good man in the best sense of the word. He was an attached member of the Church of Scotland, and a plain, unostentatious, Christian man. All those who had the pleasure of his friendship know what a fund of rich humour he possessed: perhaps our homely Scottish word "pawky" expresses it better than any other vocable. One of his special characteristics was his fondness for giving pleasure to his friends and relatives, especially his young relatives, who had an intense love for him. Only a week or two before his death he carried off one of his grandnephews, to let the boy, in one of our picturesque localities, have a holiday in that Scottish scenery for which Robertson had an equally appreciative and patriotic liking.

His death was unexpected. He had, as he himself well knew and his friends had sorrowfully remarked, been for two or three years the subject of cardiac disease, but up to a recent period he was no worse than usual. About a week before his death he had a laryngeal attack, partly inflammatory, partly spasmodic, which produced much dyspnœa. Some relief was got from ordinary treatment, but the impediment to breathing became so great that his medical friends, Professor Chiene, Dr Foulis, and Dr Wyllie, advised that tracheotomy should be performed. To this he opposed a firm and resolute negative, obviously under the belief that though it might give temporary, it would not give permanent relief; for though no such diagnosis could be made, there was a possibility that aneurism might exist. To this determination of his, to which equally as patient and physician he was entitled to give expression, his medical friends were unwillingly obliged to yield. His death, however, seemed ultimately to take place rather in the way of asthenia than asphyxia.

Dr Robertson was unmarried. He has left two sisters, one the wife of Mr John Gillespie, W.S.; the other, who presided over his household, has specially to deplore his death. His elder brother, George Brown Robertson, the last of the family who held the office of Deputy Keeper of the Records, died in 1873; his younger brother Alexander, a promising officer of artillery, was one of the victims of a treacherous massacre in the Indian Mutiny.

A. D. M.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—*Four and a Half Years' Experience in the Lock Wards of the Edinburgh Royal Infirmary.*[1] By A. G. MILLER, F.R.C.S.E., Surgeon to the Royal Infirmary, and Lecturer on Surgery at Surgeons' Hall, Edinburgh.

GENTLEMEN,—It is my intention to give you to-day, as an introduction to the course of lectures on systematic surgery, an account of my experience while in charge of the Lock wards of the Royal Infirmary during the last four and a half years. I have selected this as my subject for two reasons principally. First, because, having determined to record the results of my treatment, I have thought it right to give my class the benefit of what experience I have gathered; and, secondly, because, the number of lecture days being few enough in the session, I would like that not one of them should be given up to what is not legitimately within our special work. Of course, this lecture will be of a clinical character, but will not on that account be less useful to you.

I regret very much that, owing to an unfortunate circumstance, my statements must necessarily be founded on general impressions rather than on statistics. When the removal to the New Infirmary took place, my case-books were removed for me, and I have never seen them since. I understand that a number of the case-books were sold for waste paper, and fear that mine have suffered this horrible fate. In this way I am deprived of the histories of about the half of my patients. It is also unfortunate that, owing to a regulation of the Royal Infirmary, none but females are admitted to the Lock wards. On account of this my experience has been, as it were, rather one-sided.

Without further preliminary, I shall now draw your attention first to

Gonorrhœa.—This disease, in an acute or chronic form, was present in almost every patient who applied for admission, and the discharge, my patients being all females, came only from the vagina (except in a very few cases)—being, therefore, a vaginitis, and not a urethritis, as in the male.

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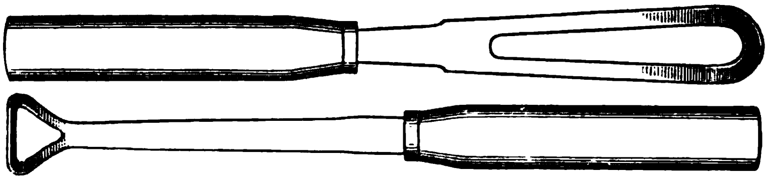
[1] Introductory lecture to the course of systematic surgery at Surgeons' Hall, Edinburgh, delivered 24th October 1882.

True acute gonorrhœa—that is to say, a thick, yellow, purulent discharge—was seldom seen, and never remained long. Those students who attended the demonstrations, which were weekly, were aware of this, for the discharge had become muco-purulent generally before the cases could be shown.

Many of the patients presenting themselves for treatment seemed to be unconscious of the presence of a discharge, though it might be considerable, and, in most, it caused little or no suffering. These latter sought advice for some other affection. Those who came on account of the gonorrhœa, or in whom that was the principal ailment, had an irritable condition of the ostium vaginæ which must have made sexual intercourse painful, and was most likely the cause of their applying for treatment. In them the introduction of the speculum was almost impossible.

I here show the kind of speculum employed by me for the last year or more. It was recommended to me by Dr Edward Henderson of Shanghai. It consists of two blades, as you see.



The two blades are employed, one in each hand, to separate the labia, so that the external parts may be examined without the surgeon requiring to touch them with his hands. Next, the narrower blade is passed into the vagina and pressed against the perineum. This opens the passage, in most cases, sufficiently to enable the operator to see and also demonstrate to others the condition of the mucous membrane. If it is necessary to examine the os uteri, the operator passes in the second blade along the upper wall of the vagina, and presses its end against the anterior wall of the cervix, when the os is tilted forwards and becomes distinctly visible. On withdrawing the instrument, the lower blade will have in its loop some of the vaginal contents, the character of which is thus discovered.

My treatment of vaginal discharges consisted, first, in attention to cleanliness. And here allow me to say that dirt, or at least want of cleanliness, is very frequently both a cause and an aggravation of disease in the class of women who came under my care. The utter absence of cleanliness, and the indifference to dirt, in most of the girls, has both surprised and disgusted me. They seemed never to wash themselves, and were quite ignorant of the value of injections. The explanation of this I consider to be the extreme youth of the sufferers, their ages ranging from thirteen upwards, the average age for the two years for which I have the case-books being about eighteen.

The second item in the treatment was rest in bed, at least for the first few days.

Lastly, injections were employed, the substances most used being permanganate of potash (or Condy's fluid), sulphate of copper, sulphate of zinc, and tannic acid with glycerine. Latterly I have generally ordered first a pint or two of lukewarm water, with sufficient Condy's fluid to make it a bright purple, to be injected twice daily with Higginson's long tube. If the discharge was not greatly reduced in a few days, I then ordered a solution of sulphate of copper (x. gr. to the ℥j.), to be continued for a few days. This lotion, I found, could not be used for long, even when very weak, without causing an increase instead of a diminution of the discharge. I have preferred the two substances mentioned above for several reasons, one of which was, that as both stain the surface, I could tell at a glance whether they were being used regularly or not. When a discharge became considerably reduced, I then ordered plain cold water or very weak Condy's fluid injections. Carbolic acid I have used very little. What I saw of it did not encourage me to continue its use.

The period within which a gonorrhœa ceased was from five to twenty-one days.

Urethritis, as I have already said, seldom accompanied the very common vaginitis. When present it was never affected by the treatment of the latter, but persisted unabated. Yet the administration of cubebs and copaiba removed the affection in a few days. This interesting result of treatment I was able to demonstrate more than once at my clinique.

Urethritis in the female is, in my experience, a much milder affection than gonorrhœa in the male. The symptoms are less severe, there are fewer complications, the disease is more curable, and leaves no trouble behind.

Of *Gonorrhœal Rheumatism* I have seen very little, though almost every patient I had was affected with a vaginal discharge to a greater or less extent. I cannot say whether, in the few cases I saw, there was urethritis present. In one case, multiple articular inflammation with effusion accompanied a discharge which was not gonorrhœal at all, but was caused by the application of carbolic acid to a chancre on the cervix uteri.

Not unfrequently patients have complained of articular pains which have disappeared on the administration of iodide of potassium and warm applications.

Labial Abscesses were not uncommon in connexion with gonorrhœa. These I used to open; but observing that they frequently gathered again or formed sinuses, I latterly left them to open of themselves, merely keeping the patients in bed and applying poultices. Cure was generally effected in a few days.

Buboes occurred occasionally, but not frequently, as the result of the irritation of gonorrhœa. These generally disappeared under rest and warm applications. I shall have more to say about buboes when referring to those the result of chancroidal irritation.

Gonorrhœal Warts were not uncommon. These growths I believe to be simple in their character, not connected with syphilis in any way, but due to moisture and warmth alone. No affection that I have had to treat has given me so much trouble or cheated me so often. I have tried all sorts of remedies, and every now and then thought that I had found a specific when a case became cured under some method; but on using the same remedy on the next case I have always had my hopes dashed. I used to think that special remedies might suit special cases or constitutions, but now I believe that no remedy (at least of those I have tried, and they have been too numerous to name) does more than keep the warts from increasing or enlarging. But a certain period arrives in their history when they cease to grow and gradually disappear. I believe that warts are peculiar to certain constitutions, and, as I have said, have a certain period during which they grow, and then of themselves they die down.

Those remedies which I found most useful in keeping down warts were, acetic acid and pyrogallic acid painted on, and calomel, or, best of all, the desiccated sulphate of iron, dusted on. As they depend on moisture and warmth for their existence, the best way to keep them down is to see that they are dry, and this is most thoroughly effected by the sulphate of iron powder. When the warts are pedunculated, they can be easily removed by ligature or scissors.

In a few cases, where the warts were large and massed together on the labia, I had to remove them by the thermo-cautery, along with the skin from which they grew. This always left an extensive ulcer and marked cicatrix. I have, therefore, always preferred the ligature where it could be applied. The ligature requires two or three operations instead of one; but the result is, in my opinion, much more satisfactory, as there is no ulceration or cicatrix left.

Of the *Sequelæ of Gonorrhœa* in the female I cannot say much. Ovarian and uterine affections, which had probably arisen from an extension of the vaginal inflammation, were observed, but not to the extent I would have expected from the almost universal condition of gonorrhœa or other vaginal discharge in the patients admitted. On the other hand, I have frequently been able to show to the students the os uteri with its plug of natural glairy mucus in cases of recent and of old-standing discharge.

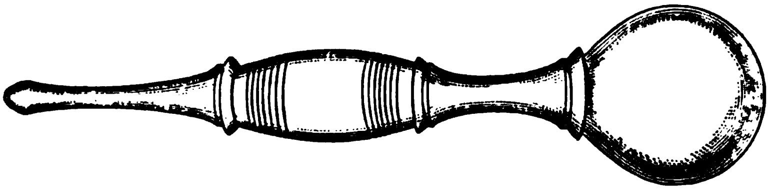
Chancroids.—Perhaps I hardly need say that I am a believer in the so-called dual theory of Bassereau and Ricord. That is to say, I believe with many eminent authorities that there are two distinct venereal sores, the one of which is purely local, while the other affects the constitution to a greater or less extent. I cannot at present enter into this important and interesting question. I shall merely say that I was taught by my father and by my predecessor in this place, Dr Watson, to believe in the dual theory, and my experience in the Lock Hospital has confirmed me in that belief. I do not say it is always easy to tell a non-infecting from an infecting sore, or that the characters of each are always so distinct as to make it a simple matter to predict in any given case whether the system will be infected or not; but I do say that, according to my experience, there is a sore which is followed by syphilis, and that sore has the characters (more or less distinctly marked) of the Hunterian chancre, while there is another sore which has inflammatory characters and does not infect the system with syphilis.

The appearances of the chancroid, as I have noted them, have been these:—It is a painful, inflamed, suppurating, punched out, circular or oval sore, with red margins and yellow base, usually multiple, and can be reproduced on the same subject by inoculation. There is usually a profuse discharge. The surrounding parts are inflamed and painful. The inguinal glands are inflamed and liable to run on to the formation of buboes. These sores have a tendency to run a special course and heal of themselves. But, from frequent auto-inoculation, want of cleanliness, insufficient diet, or other causes, they may persist, or spread, or take on phagedænic action. The chancroid, when inoculated on the thigh (for instance), presents first the appearance of a red spot, then a pustule forms, which bursts and gives rise to the sore described above. This sore seemed to owe its origin, in most cases in my wards, to want of cleanliness along with a low condition of the constitution. In only a few cases could any history of direct infection be made out. I believe that any purulent fluid in a septic condition (and there was usually plenty of that about my patients), finding its way to an abraded surface, or into some follicle (of which there are numbers about the female genitals), may produce such a suppurating sore as I have described. For I believe the chancroid to be simply an inflammatory sore, and quite local in its effects.

Chancroids may increase to the size of a sixpence. I don't think I have seen them larger, but often much smaller. They are generally multiple: I have counted as many as nineteen on a patient on admission. A common number is from six to ten. They are generally situated in the folds between the labia majora and minora, or more commonly on the opposing surfaces of the latter. They are usually symmetrically placed directly opposite each other, this being evidently due to auto-inoculation. I have also seen them at the anus and on the inside of the thighs. A common place is at the fourchette. I don't think I have ever seen them inside the vagina.

My treatment of chancroids has been modified very much, and latterly simplified, and also, I am sure, much improved, since the introduction of iodoform as a remedy. I used to cauterize these sores, especially when phagedænic, destroying them with caustic potash or chloride of zinc. Now I simply dust them with iodoform powder and keep them dry, and they invariably heal up in a few days.

Iodoform is specially useful in the female on account of its power of diffusing itself and penetrating into corners. Formerly, with the caustic treatment, I was never certain that I had destroyed all the sores, and knew that if one was left the chancroidal action would reproduce itself. Now I can be perfectly certain that if I put on the iodoform freely the disease will be thoroughly checked. The action of iodoform on phagedænic sores is even more remarkable than on ordinary chancroids. My experience is that 24 hours, or at most 48, are quite sufficient to establish a healthy action in the sores. I use the iodoform pure, the crystals being pounded to a fine dust, which is blown on to the parts affected by means of the instrument which I show you.



It consists of a wooden tube, widened out at the centre, where the powder is placed, and then blown out at the nozzle by pressure (with the thumb) on the indiarubber ball placed at the other extremity. When the labia are held aside by means of Dr Henderson's forceps in the hands of an assistant, the surgeon can blow any quantity of the powder that may be necessary directly on the affected parts, and as these are always damp, a sufficient quantity of the iodoform adheres to destroy the septic action of the sores. If all the sores are not reached at first, a second or third application may be necessary. Generally there was sufficient dusted on to act on all the sores, even those that were out of sight.

Chancroids on a syphilitic person run an ordinary course, but are apt to be followed by condylomata.

Phagedæna was seldom seen. I believe it to be closely allied with erysipelas, for I have seen the latter arise from the introduction of the former into my wards; and, believing as I do, I have placed patients with phagedænic sores in the erysipelas wards, and with perfect safety to them. This might be an interesting subject for investigation by some of you, and might result in some valuable discovery. For instance, iodoform, which is so beneficial in phagedæna, may turn out as useful in erysipelas. We already know the value of tincture of iodine in that affection.

Buboes are most commonly associated with chancroids. Their character is essentially inflammatory. At first the glands are enlarged and indurated. The induration differs from that met with in syphilis, in that the glands are matted together in the former case. Usually one gland becomes more especially inflamed and tender. The parts over it become red and swollen. After a short time the superficial redness and swelling subside, the gland becomes more prominent, and shows evidence of having suppurated. If the bubo is left to itself, it reaches the surface in the ordinary way by thinning of the skin over it. After discharging, the bubo generally opens out rapidly and forms a sore which becomes chancroidal, and the discharge, when inoculated, is capable of producing chancroids.

The treatment I adopt is as follows:—In the earliest stages, rest and fomentations, which are often sufficient to bring about resolution, provided the chancroids are cured, or other irritative cause removed. When redness has occurred superficially, indicating involvement of the surrounding textures, I have seen the application of a few leeches beneficial. If there is evidence of suppuration I hasten the process of pointing by blistering and poulticing.

My experience has led me to believe that there is nothing to be gained by making an early opening. When a bubo is opened early it does not heal quickly, and sinuses are apt to form. And this occurs, I believe, for the following reasons:—1st, As the abscess is deep-seated, a dependent opening cannot be obtained. 2nd, As the diseased gland is not entirely destroyed, but yet is in a condition that will prevent its recovery, the process of suppuration will certainly go on, and will most likely give rise to burrowing and subsequent sinus. 3rd, As the surgeon has to cut through more or less of sound texture, the line of incision is liable to be infected by the pus of the bubo and take on chancroidal action. Antiseptic opening and opening with the thermo-cautery may meet and overcome some or all of these difficulties. But I have never employed these methods, being perfectly satisfied with the one I shall now describe.

Having left the bubo to mature, or rather, having hastened its maturation, when this is completed I incise it freely from end to end (a bubo is always ovoid), squeeze out the pus and sloughing texture, and then fill the cavity with iodoform. The result of this treatment, if properly carried out, is that a healthy action is induced in a day or two, and the sore heals in a week or ten days. I have one caution to give. The iodoform, if left too long in the wound, causes a weak or flabby condition of the granulations, and so impedes the healing process. Whenever the surface becomes clean and healthy I insert into the wound lint soaked in carbolic oil (1 to 40) or in red lotion. The other necessary points in the treatment are keeping the patient in bed (lying, not sitting up), and keeping the edges of the wound from coming into contact, which is done by the piece of lint.

I have only once seen a phagedænic bubo. It arose from a phagedænic chancroid, but was speedily cured by iodoform. If there are sinuses, I treat them by free incision and keeping the edges apart till the wound heals from the bottom.

I have said nothing about the period of incubation of a chancroid, simply because no reliable data could be gathered from the majority of my patients, no statements of theirs being at all trustworthy. In some few cases, however, where the histories seemed to be distinct enough, from three to five days was the period stated.

Syphilis.—By this term I understand a disease the principal manifestations of which are an indurated chancre, indurated glands, periosteal pains, early cutaneous eruptions, condylomata, and mucous patches, also sore throat and iritis, succeeded after an interval by later eruptions, ulcerations, gummata, and periosteal affections. Syphilis I believe to be an eruptive fever, with special manifestations, and a power of so affecting the system as to leave (at least in many cases) permanent traces of its presence.

The early eruption in syphilis is preceded by feverishness. This I have frequently observed, and on one occasion noted a temperature of 103° Fahr.

I wish also to state here that I have seen cases in hospital and elsewhere which have greatly shaken my faith in the curability of syphilis. As examples, I would remind you of those numerous instances where those who have apparently recovered have yet transmitted a tainted constitution to their children. I shall now take up a few of the manifestations of syphilis.

The Chancre was very seldom observed in the Lock wards, for two reasons. In the first place, it causes so little inconvenience that patients do not apply for treatment. In the second place, it is not easily seen or recognised. Speaking from recollection, I should say there have been only nine or ten cases in the Lock wards during the last 4½ years. Of these about half were on the face. This latter fact shows that, were chancres as visible and inconvenient on the genitals, patients would present themselves more frequently for treatment; for labial chancre is undoubtedly rare. In other cases in which the chancre was observed, it was situated on the labium majus, at the fourchette, and on the cervix uteri.

The characters of the chancres which I observed were the following:—Absence of pain, redness, suppuration, and all signs of inflammatory action. Induration was not always present to a marked extent. When present it soon melted away. It was best marked on the lips. The ulcer was usually single, of a dark colour, and had a small amount of watery discharge. The course of the ulcer was towards healing, but on the genitals it was apt to turn into a condyloma.

I don't think careful note was taken of the time the chancres took to heal, but I should say it was about a fortnight or three weeks. The treatment adopted was the application of black wash, calomel, and laterally iodoform dusting. I don't think any of these applications did good beyond keeping the parts clean.

Such a sore as I have described was always followed by infection of the system, the first symptom of which (unless the chancre be considered the initial symptom) was *Glandular Induration.* This was always present. The glands were slightly enlarged, hardened, as a rule painless, and easily separable from one another. They differed from chancroidal buboes in a total absence of inflammatory signs, such as pain and matting together. The glands became softer after the lapse of months, and gradually returned to their natural condition. The time they took to recover varied much in individual cases.

I used to think that the condition of the glands was a safe indication for treatment, but I have found that the constitutional manifestations bear no direct relation to the glandular condition. The glands in most direct relation to the chancre were those first, most, and longest affected with the induration.

I have seldom found the epitrochlear gland indurated, though when I was in Vienna I used to see it affected in almost every case. I have never directed any treatment towards the glands specially, believing that they required none. I have not seen syphilitic glands suppurate. I have certainly seen suppurating buboes on a syphilitic person, but there was always some distinct and separate cause for these.

Pain over the sternal, acromial, malar, and other bony prominences, evidently periosteal, frequently appeared as an early symptom of syphilis. It manifested a rheumatic character, being worse at night, worse when the parts were exposed to cold, aggravated by pressure, prevented by covering the part over with wadding, and completely removed by large doses of potassium iodide and the application of warmth. There was sometimes severe headache, also, which was of the same character and removed by the same remedies.

Condylomata were by far the most common syphilitic affection seen in the wards. They were usually early in appearing, sometimes also late. They may present themselves any time during the so-called secondary period—that is to say, within the first six or nine months of the disease.

A condyloma is an oval or rounded elevation occurring on the skin, or rather *in* the skin. It is caused by an exudation identical, I believe, with that which causes the induration of a chancre. I believe this because I have seen a chancre turn into a condyloma by imperceptible gradations; and I have likewise seen a spot of syphilitic eruption become a condyloma without one being able to say when it ceased to be the former and became the latter.

Condylomata spread by their margins, and so often coalesce and form a string or long band, thus losing their characteristic rounded form. They seldom become much elevated, but I have seen them become papillated on the surface in those who had a tendency to warty formations. Warts may also exist side by side with condylomata. The former, however, are essentially non-syphilitic, while the latter are, I believe, always syphilitic. At least I have never seen condylomata except on syphilitic subjects.

Condylomata frequently become ulcerated and discharge purulent matter from their surface. The ulcer, however, is quite superficial, and the suppuration is more of the character of a rapid desquamation. On healing they leave no cicatrix. Ulceration only occurs where the parts affected are allowed to become very dirty and sodden with discharge.

Condylomata owe their existence to the presence of moisture and warmth. They grow, therefore, mostly on the genitals in the female, but I have also seen them in the groin, on the inside of the thighs, round the anus, under the mammæ, in the axilla, between the toes, and occasionally on the back of the neck, under the roots of the hair. They grow most luxuriantly on the labia majora, where they sometimes become pedunculated from their pendulous position. I have seen a condylomatous mass extending on both sides from the pubes to behind the anus, like two enormous sausages. As condylomata are produced readily by the irritation of moisture and warmth, the treatment for their removal must necessarily be the application of what will keep them dry and cool. After trying many remedies, I have latterly used only dusting with calomel, and the interposition of a piece of dry lint between the labia. The calomel has no specific action, being insoluble; but it adheres readily to moist surfaces, and, being heavy, it flies in a fine cloud from the dusting instrument. A wonderfully small quantity suffices. Of course the patient must wash and dry herself thoroughly before the dusting, and again before night.

I have frequently demonstrated to the students that a single week of calomel dusting, without any internal or other treatment whatever, has made a great difference on even the worst cases. I usually allow about three weeks for a cure. Sometimes hardened bases remain, which soon disappear under the application of sulphate of copper in the solid form. I do not use this more stimulating remedy earlier, because it is painful and not one whit more efficacious than the dusting. Internal treatment may assist the cure, but is not necessary, the affection being due to local causes.

Patients have not unfrequently returned with condylomata as bad as ever, after complete removal, the result of their neglecting to keep themselves clean. Of course it would be preferable to keep the patients in hospital till they are cured of the tendency to syphilitic manifestations, but the number of beds I had at my disposal (only 14 in the old Infirmary and 16 in the new) prevented my being able to do this. I was obliged to send out patients whenever they were relieved or cured of the existing manifestations, in order to admit those who were much worse and who more urgently required treatment.

Mucous Patches are the same as condylomata occurring on mucous membrane. They present the appearance of slightly elevated whitish patches, usually of a rounded or oval shape. They occur principally in the mouth, and are situated at the angles, on the lips, on the gums, on the inside of the cheeks, where they come most in contact with the teeth (notably beside decayed teeth), on the tongue (at its margins or on the dorsum), at the pillars of the fauces, and on the tonsils. In the last situation the patches resemble condylomata on account of the tonsils becoming thickened and hypertrophied at the spots affected. Mucous patches also occur inside the vaginal orifice, and I have seen them inside the nares.

As they cannot be kept dry, they must be treated differently from condylomata. In the first place, all sources of irritation must be removed. Decayed teeth must be extracted, smoking stopped, the mouth kept clean by brushing the teeth, etc. For local application I have found the green stick most useful, firmly rubbed on the mucous patches twice or thrice daily (sulphate of copper, with a fourth or fifth part of borax to assist fusibility). In some cases I have seen benefit from a mouth-wash or gargle of corrosive sublimate, ½ or ¼ gr. to the ℥j.

Mucous patches generally disappear very quickly under proper treatment.

We now come to the subject of *Eruptions*, and for convenience I will not separate the earlier from the later forms. I prefer to use the terms "earlier" and "later" instead of the old names "secondary" and "tertiary," because I do not believe the earlier eruptions are secondary: they are in reality primary.

The period of incubation, from infection till the appearance of the eruption, could not well be calculated from the class of cases I had in my wards, because in the majority of instances the girls could not be certain of the exact date of infection, and, besides, were they to attempt a statement, it would be very unsafe to rely on it. Judging from the few cases I had where there was a chancre present on admission, I would say that an early eruption is likely to appear from six weeks to two months after infection.

Eruptions varied much in amount, being often very slightly marked, and in other cases very extensive and well marked. They were sometimes, and not by any means unfrequently, so faintly marked as to escape the notice of the patient. This I have often demonstrated to my class. Patients have stated that they had no spots on them whatever, while I have been able to demonstrate a few (quite sufficient to establish a syphilide) on the shoulders or chest. I have seen this so frequently, that if I have good reason to suspect syphilis from symptoms present, I never trust the patient's statement in the negative, for I know that there may have been an eruption so mild that it escaped observation. On the other hand, I have known eruptions which were not syphilides, more especially acne, psoriasis, and scabies, mistaken by patients and others for syphilitic.

The localities which should be examined when the eruption is scanty are the back of the neck and shoulders, the chest, and abdomen. Early spots occur also on the front of the arms and the inside of the thighs.

Syphilitic eruptions have certain peculiarities, which I have noticed more or less regular in their presence.

Firstly, The eruption is not the same all over the body: there is a mixture of the different types, such as papular, squamous, pustular, tubercular, etc.

Secondly, The spots early show a tendency to desquamate. Take a papular eruption, for instance. The apices of the papules will almost at once show a few loose scales, and as this goes on the eruption becomes papulo-squamous.

Thirdly, The eruption shows no definite order of appearance on the different parts of the body. It usually comes out in successive crops on any or all parts of the body. I have seen a few cases, however, in which the eruption appeared first on the upper part of the body and travelled down, disappearing in the same manner.

Fourthly, The spots, when closely examined, are always found to be raised above the surrounding skin by what seems to be a certain amount of new deposit. This, I think, is proved by the fact, already referred to, that this base may change into a condyloma. It is this, I believe, which constitutes the special character of a syphilide. I have not examined into the special pathology of eruptions by making microscopic sections. I speak only from clinical observation. If it be true that the base of a chancre, of a condyloma, and of a syphilitic eruption spot is the same formation, it would explain at once how the transition occurs so easily from the one to the other, and how eruptions vary so readily and quickly in appearance. It would also demonstrate that a chancre is really a result of constitutional infection as much as an eruption or a condyloma.[1]

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[1] I have submitted this opinion to my friends Professor Hamilton of Aberdeen and Dr Allan Jamieson, Lecturer on Skin Diseases in Edinburgh, and they both tell me that there is no difference perceptible in the histological structure of the base of a chancre, condyloma, or syphilitic eruption spot. In each instance there is considerable proliferation of epithelium from irritation, and great exudation of leucocytes, with dilatation of the bloodvessels. It is therefore quite plain, on the one hand, how the three manifestations are convertible; and, on the other hand, it is evident that, as this tendency to a

Fifthly, Syphilides have a coppery hue, which appears sooner or later, but generally not at first. The copper marking is at the base of the spots.

Sixthly, Syphilitic eruptions tend to persist. They come out in successive crops, and while they die down at one part, fresh spots come out in the neighbourhood or at some other part.

Seventhly, These eruptions are frequently followed by maculæ or stains, which are either dark brown or purple.

During the early eruption period syphilitic persons have a peculiar condition of the skin of the face which I consider to be quite characteristic, though very difficult to describe. It consists of a roughness of the cuticle and a fissured or puckered state of the margins of the mouth and nose. I have never seen this condition of the face except on a person affected with syphilis.

I shall now take up a few of these eruptions separately. I cannot go fully into them all, but will merely refer to such points as have occurred to me as being worthy of special remark from their rarity, or still more as being worthy of your attention from their clinical value from being common.

Among these latter let me say a few words on *Psoriasis Palmaris.* This affection I have frequently seen, and have from it been enabled to diagnose syphilis in otherwise doubtful cases. I have found it present most frequently along with a papular or papulo-squamous eruption. At first there are a few spots on the palms of the hands, slightly elevated, and of a coppery colour. These, if left alone, become larger and more numerous. The skin of the palm then becomes thickened and fissured. You will see from this description that the affection is not psoriasis, though it is thus called.

There is another affection of the palms of the hands which occurs in gouty persons, and which resembles the syphilitic form somewhat. It differs, however, in the following important points:—It is not coppery in colour; there is fissuring of the points of the fingers; and it is very difficult to treat, being liable to relapse. The syphilitic affection, on the contrary, I have found very readily removed by the application of an ointment consisting of equal parts of ung. hydrarg. and vaseline.

True *Psoriasis,* affecting the elbows, knees, etc., I have seen on syphilitic subjects, and found it give way to ordinary treatment, arsenic, tar, chrysophanic acid, etc. On the other hand, I have seen a psoriasis-looking eruption which resisted these remedies, but was removed at once by anti-syphilitic treatment.

Eczema I have observed on syphilitic patients, due, I believe, to irritation, and occurring in persons liable to this affection. The irritation has been either a discharge from an eruption or from a gonorrhœa, or scabies. For example, I have seen eczema on the

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special form of exudation is the result of a constitutional taint, the induration of a chancre is a proof that the system is already syphilitic.

ears, etc., associated with a pustular syphilide on the scalp, on the arms from the irritation of scabies, and on the pudenda from that of a vaginal discharge. The eczema, I need hardly say, was not syphilitic, though maculæ were left by it on account of its occurring on a syphilitic subject.

Scabies was frequently seen in the wards. I think a majority of the patients suffered from this disease, some of them very severely. Sometimes there was a little difficulty in the diagnosis, but the occurrence of vesicles or pustules between the fingers and round the wrists generally made matters clear. Although these parts were most constantly affected, scabies was observed on many other regions of the body—on the thighs and genitals, on the mammæ, in the neighbourhood of the axillæ, round the waist, on the hips, on the front of the arms, etc., and in some cases hardly any portion of the body was unaffected. This eruption, though non-syphilitic, frequently left well-marked maculæ.

The most common syphilide seen by me was a papulo-squamous form, appearing first about the neck, shoulders, and chest, and presenting the appearance of a slight elevation with a scaly apex, and sooner or later a coppery colour.

Syphilitic Lupoid Ulceration affecting the face, and closely resembling lupus exedens, I found not uncommon, and always very amenable to treatment. I had two cases, also, where the genitals were the parts affected. The effect of treatment in these cases will be best seen by my quoting briefly a typical instance of lupoid ulceration of nose and upper lip.

CASE I.—Seven months before admission a pimple appeared on the nose, which broke and spread rapidly by ulceration. On admission there was seen an ulcerated surface, about an inch and a half in width, occupying the position of the nose, which had been almost entirely destroyed. There was also an ulcerated surface on the upper lip. The ulcers had tuberculated margins. There was a history of syphilitic infection four years before admission. Treatment—vaseline to the sore, and potassium iodide internally, gr. xx. thrice daily. A few days after the commencement of treatment a superficial slough separated from the entire surface of the ulcer, which left behind a healthy granulating surface, and cicatrization began immediately thereafter. Marked progress was perceptible from week to week, and in less than three months the patient was dismissed cured.

Serpiginous Ulcers I have found do well under the iodide internally and the application of chloride of zinc as a caustic, or Volkmann's spoon locally.

Before leaving the subject of eruptions I wish to describe a very remarkable case of mixed eruption which occurred in the wards quite recently.

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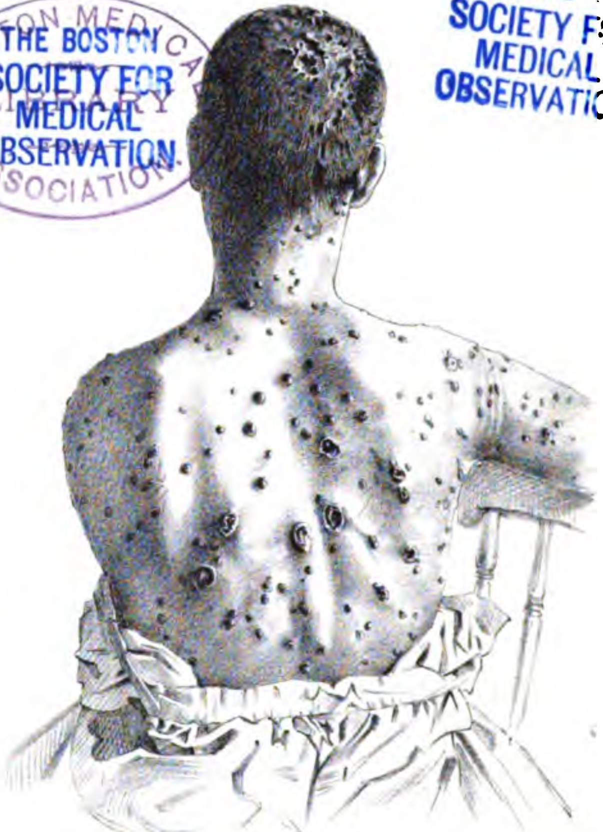

Mr A. G. MILLER'S Paper.—Case II. Mixed Syphilitic Eruption.
From a Photograph.

CASE II.—On admission patient was found to have a papulo-squamous eruption on her breast, back, legs, face, and head, which was mixed with pustules, and also about a dozen rupial spots with limpet-shaped crusts. Patient had a chancre on the left labium majus, two chancroids, and a suppurating chancroidal bubo. The eruption during nearly three months persisted, coming out in successive crops, and retaining its mixed character almost to the last, the whole body being covered with papular, squamous, pustular, and ulcerated spots mixed together. There were latterly a few spots, also, of a tuberculated character. Thus a later type was mixed with an eruption occurring at an early period. Another interesting feature in this case was that mercury was not well borne, a few doses of the perchloride (gr. $\frac{1}{32}$) being sufficient to cause salivation. A mixture of chlorate and iodide of potassium seemed to benefit, and thus the late type was again evidenced in the remedy which was beneficial. This was remarked by Dr Allan Jamieson, who kindly came up to the wards on purpose to see this patient. (The plate represents the eruption when it was about its worst.)

Iritis was not uncommon, and was always easily cured by mercury internally, atropine to dilate the pupil, counter-irritation to relieve pain, and a shade over the eyes. There was usually a greater or less amount of keratitis present, which perhaps accounted for the pain and photophobia which generally existed to a considerable extent.

There was, a short time ago, an interesting case of *purulent ophthalmia* in an infant who came into the wards along with its mother. Believing that the danger in such cases consists in the retention of the pus in contact with the eye, I gave the nurse instructions to have the child's eyes syringed out with a weak solution of alum five or six times a day, oftener if necessary, to keep the eyes free from pus. After a day or two, when considerable improvement had taken place, a weak solution of nitrate of silver was used. To the credit of the nurse, a complete cure resulted in about a week.

Ulcerations of Mouth and Nose were not common. They occurred in late syphilis, and were benefited by iodoform locally, and potassium iodide and tonics internally.

Ulcerations of the Throat, occurring in early syphilis, were not severe, and generally disappeared speedily under the local application of the sulphate of copper or a mercurial wash.

Gummata were frequently seen in all stages, from a "small lump" to a completely softened and broken-down mass resembling an abscess. These were all treated the same way, namely, with large doses of potassium iodide. In no instance was the knife necessary, but in every case the gumma (hard or soft) was absorbed. In some few cases a local stimulant to absorption (in the shape of iodine liniment) was used to assist in the removal of the last traces.

Two cases of so-called *syphilitic phthisis* occurred under my care. The disease was associated with ulceration of the larynx, and appeared late—about two years after infection. The symptoms present were cough, shortness of breath, and expectoration of clear frothy sputa. The signs were, slight dulness posteriorly over the greater part of one or both lungs, with mucous râles. The condition is one of interstitial deposit of gummatous material in the connective tissue around the lobules, mostly in the superficial parts of the lung posteriorly. This is associated with a catarrhal condition of the air-tubes, which is either the cause or consequence of the syphilitic deposit; I am not prepared to say which. The disease was rapidly removed by the internal administration of potassium iodide and the external application of a liniment containing equal parts of comp. camphor and croton liniments.

I wish now to make a few remarks on the actions of certain remedies as observed in my wards.

Mercury I take first because there is so much diversity of opinion as to its advantages and disadvantages in the treatment of syphilis. I have always believed that it is useful. My faith has not always been equally strong; but it has always existed, and still remains. When I first got charge of the Lock wards I determined to experiment on the action of mercury by treating half my patients with it and half without. The exact results I cannot give you, unfortunately, on account of the loss of the case-books, as I told you already; but I can tell you what I recollect of the results, and what was the effect on my practice, and you can receive what I say for what it is worth.

The first thing I remember is that now and then we had to shift a patient to the mercurial side because she was not getting on so well as the others. Another thing I remember is that the non-mercurial patients who went out of hospital apparently cured came back to us very soon again, and to these I always gave the mercury. The third thing I remember is that I ultimately gave up the arbitrary division of the ward, and treated my cases just as I thought they required. Of late I have given mercury to almost all my patients in the earlier stages of syphilis.

The form in which I gave the drug was the bichloride in solution, $\frac{1}{16}$ or $\frac{1}{32}$ grain doses. I employed this form for the following reasons. I began with it, and wished to keep to the one form of administration, that I might the better judge of results. Secondly, I consider it the purest form in which to give the metal. In almost all other preparations there is some other medicinal agent combined (as iodine, for instance). Thirdly, I think that salivation is more easily avoided, because the irritant action is earlier shown. I have hardly ever seen my patients salivated, because I stop the mercury whenever the stomach or bowels show signs of irritation.

In many instances mercury was beneficial. Let me give one instance.

Case III.—A married woman was admitted who had a well-marked eruption of a papulo-squamous character with intense coppery staining. On admission she was given potassium iodide without any improvement being noticed. Mercury was then given, when at once she began to improve, and in less than three weeks the eruption had entirely disappeared. Some may say that the removal of the eruption was not the cure of the syphilis. Perhaps not; but the cure of the eruption was a matter of great importance to the poor woman.

I have seen mercury do good in another form. There were eruptions, both specific and non-specific, which seemed readily curable only up to a certain point if on a syphilitic subject. In such cases the application of a little blue ointment generally removed the last inveterate traces in a few days. You will remember that I found mercurial ointment beneficial in palmar syphilis.

I believe, therefore, that mercury promotes the disappearance of eruptions, and that consequently it ought not to be discarded. As to its supposed power of postponing or modifying eruptions when given before their appearance I cannot speak. I also consider that mercury is occasionally useful in late syphilis in combination with potassium iodide. The former seems to assist the action of the latter.

I administered mercury always with a view to benefit symptoms, and was always guided by its effects on these as to the amount to be given. I never saw any harm arise from the use of the drug as I gave it. One or two cases of aggravated late syphilis I saw in which mercury had been given previous to admission to my wards, and in which there had been salivation to a greater or less extent. I cannot say that the severity of these cases was due to the mercury, but it may have been.

After reading the accounts given by the older writers (such as Hunter, Colles, etc.) of the fierce salivations to which they subjected their patients, and comparing both treatment and results with what I have seen in my own wards, I cannot but think that some marvellous change has come over either the constitutions of this generation or over the disease. On the former point I do not consider myself competent to judge, not having the different generations to compare together; but of the disease I can say that the manifestations are less severe. Even within the last twenty years I am certain that the symptoms of syphilis are, as a rule, milder; and I do not see now as aggravated cases of late syphilis as were brought under my notice when I was a student, or were under my care when I was resident surgeon to the Lock Hospital in 1865. Whether or not this change for the better among the latter is due to the treatment with large doses of mercury having been given up, I am not prepared to state.

Iodide of Potassium I wish now to refer to shortly. I believe it to be *the* remedy in later syphilis, but it has its uses occasionally in the earlier manifestations also, as in the periosteal pains and headache to which I have already referred. In these cases large doses are necessary (30 grains).

All the later manifestations are benefited by the iodide; some of them disappear entirely, as I have already told you, under the administration of this medicine alone.

The rose has its thorn, however, and even the iodide has its drawbacks. In some persons the iodide produces spots of acneform appearance, which generally affect the face considerably. This, in my opinion, is no trifle; for though the eruption dies down on the iodide being stopped, there may remain copper-coloured markings. Any spot on the skin of a syphilitic person, whether due to the syphilis or to some irritation, even the mark of a mustard plaster, may be followed by copper staining. This you should remember, and not needlessly apply blisters or other irritants on conspicuous parts, nor continue the use of the iodide, if it can be avoided, when it produces spots on the face. I am in the habit of giving potassium iodide in gr. x. and gr. xx. doses, usually with some tonic, as quassia, iron, or ammonia, as a stimulant to counteract its depressing action. I must say, however, that I have never seen the iodide cause depression; on the contrary, I have been able frequently to point out to the gentlemen attending the weekly demonstrations in the Lock wards that it acts as a tonic in the later stages of syphilis. Patients even get fat on it. When symptoms of iodism appear, I always stop the drug and give tonic treatment.

Hydriodic acid I have given in a few cases lately, and been pleased with its effects.

Iodoform I consider the most valuable addition to the treatment of venereal diseases that we have had for many years. I have already said a good deal about its usefulness in chancroids, chancroidal buboes, phagedæna, etc I may add that I have found it very useful, also, in the later manifestations of syphilis, such as ozœna, ulcers of the mouth, nose, etc. For these cases I use it as a fine powder dusted on, or suspended in vaseline or glycerine, in the proportion of from gr. x. to ʒj. in the ounce. I have used the drug very freely, and have never seen any bad effects; but as the application has almost always been to suppurating, and therefore non-absorbing surfaces, effects upon the system are not likely to have occurred.[1]

[1] As the great drawback to the use of iodoform is its disagreeable and persistent odour, the following mixture for covering the odour will be interesting to you, and valuable to the profession. It is the invention of Mr Charles Arthur, the chief dispenser to the Royal Infirmary :—Iodof., ℥ij. ; ol. eucalypt., ♏15 ; ol. verben., ol. mirbane, ol. lavand., ol. limon., āā ♏ 5 ; M. This mixture does not in any way interfere with the use of the iodoform as a powder.

Before closing this lecture, allow me to say a few words on the dieting of syphilitic patients. The disease is undoubtedly debilitating, and, from its nature, depressing: appetite and digestion are usually bad. Accordingly proper treatment implies nourishing food as well as appropriate drugs. Food, to be nourishing, must be digestible. As an example of what I mean, allow me to refer to the case of a girl who suffered from lupoid ulceration of the vulva. She had received a variety of treatment, both locally and generally, and when she came under my care was being fed on beefsteaks and porter. Notwithstanding all this she was emaciating steadily, and was supposed to be dying. I changed her diet to milk, and gave her Mackenzie's cod-liver oil emulsion. She at once began to improve, the ulceration took on a healthy action, and in the course of time she became quite fat and strong. This leads me to say that I have never administered alcoholic stimulants in my wards as a remedy or in any other way except once, when I allowed porter to a poor girl who was dying of phthisis, and who asked for it, fancying it would give her some appetite. This was the only fatal case I had during the four and a half years. Several severe cases were admitted to the wards, and my clerks have remarked that such a case would be sure to die, or such another to require stimulants. As I have already said, syphilis is a debilitating and depressing disease. For all that, alcohol is not indicated; on the contrary, I believe it would be injurious. Even my worst cases have all improved under appropriate diet and remedies. I have seen patients emaciated, so weak as to be hardly able to stand, and covered with gummatous sores, who got well and strong in a few weeks on milk diet and potassium iodide, the latter acting as a powerful tonic.

I have now given you my experience, though in rather fragmentary a form. But what I have said has occupied so much of our time that I cannot even attempt to collate the facts or generalize on them. I hope, however, that you have taken notes of my statements, which will be useful to you when we come to consider the subject of venereal diseases in our regular course, and, I trust, will also be of service to you when you enter on the practice of your profession.

ARTICLE II.—*The Cardiac Inorganic Murmurs in Debility and Anæmia: a Reply to Dr Balfour of Edinburgh.*[1] By WILLIAM RUSSELL, M.B., Honorary Physician to the Carlisle Dispensary.

OUT of deference to Dr Balfour's feelings, and as I have no desire to pose as a reformer of medical nomenclature, the title of this paper has been modified sufficiently, I hope, to soothe the one and remove any suspicion of the other. I refrain, however, from using the appellation hæmic to the murmurs in question for three reasons: *first*, because they are not hæmic, and the term is particularly misleading; *second*, because they are almost equally well known as inorganic or functional; *third*, because there is a general impression that a basic bruit may be hæmic (in its original sense), but that bruits elsewhere are necessarily due to organic and irreparable valvular lesion.

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[1] Dr Balfour's paper is published in the *Edinburgh Medical Journal* for September. My paper appears in the same journal for August.

The interesting historical sketch with which Dr Balfour prefaces his paper is certainly effective in accentuating the difference between the present, as represented by Dr Balfour, and the past, as represented by some great names. There is, however, another way in which the subject may be approached, and which is at least equally instructive.

Hope, as Dr Balfour says, "gives forth no uncertain sound as to his opinion of the causes of the hæmic murmurs." To him the conditions were, alteration in the constitution of the blood, diminution in the tension of the vessels, and an altered velocity of the current; and to him these were sufficient to cause murmur. The murmur, when heard over the heart, was purely an arterial one, having its origin at the aortic orifice. Hope also recognised a systolic murmur, having a similar site, as present in cardiac hypertrophy with dilatation, but says that "it is restricted to those cases almost exclusively in which there is anæmia;"[1] but he also thinks the changed form of the ventricle probably co-operates in its production by the blood-currents meeting at more obtuse angles at the aortic orifice. Here we have the same sort of fundamental idea of altered blood-current and altered proportions of arterial lumen; while the presence of murmur in the arteries, its ready production and demonstration in them, naturally led to the conclusion that cardiac basic murmur, when inorganic, must have its origin at the gateway of the arterial system. The varying extent of its audition, its variable point of maximum intensity, were instances only of the vagaries which characterized all murmurs. Such was his position when hampered by this "hæmic" idea. In his chapter on dilatation, however, he takes up the position that if the cardiac muscle be flabby or softened, from general emaciation or anæmia, etc., its resisting power is diminished, and it is more susceptible of dilatation. Among the causes of dilatation he places "deficient power of the heart, whether congenital or acquired" (p. 279). And he further believed that this dilatation might lead to mitral regurgitation and murmur (p. 287). Not only had he advanced thus far, although evidently with faltering step, but, in his criticism of the confusion into which Lænnec had fallen about aortic murmurs, he gives, as one of the reasons why it was not surprising Lænnec should have overlooked regurgitation, the following:—"Because the organic lesion of the valves producing it is often slight, nay, sometimes totally absent; for the regurgitation may result from mere dilatation of the orifice" (p. 90 *et seq.*).

[1] *Diseases of the Heart*, London, 1849, p. 88.

Walshe gets beyond Hope's position, and divides inorganic murmurs into hæmic and dynamic. The hæmic murmur was to him "invariably basic in seat and systolic in time, produced at the orifices of the aorta and of the pulmonary artery; scarcely conducted in the direction of the aorta at all; frequently audible, on the contrary, at the second left or pulmonary cartilage; only in exceptional cases audible below the nipple; and never, within my experience, perceptible as far as the left apex or outward towards the axilla." [1] He further recognises that even where there is no murmur in the arteries to aid in diagnosis, "the cardiac (basic) murmur may be truly inorganic" (p. 87). And he refers its explanation to the facts connected with the venous murmur. With him, as with Hope, the term hæmic was no misnomer, but expressed accurately his opinion of its causation. In the dynamic class the murmur might be basic and systolic, as seen in hysterical females with violent cardiac excitement and slight spanæmia, and in males with palpitating heart (p. 88). But the dynamic murmur was not confined to the base: it might be situated at the apex, and have "all the attributes of that denoting mitral regurgitation" (p. 89); and he exemplifies this class by, amongst others, the apex bruit of chorea, and "certain regurgitant murmurs attending dilated hypertrophy of the left ventricle, and disappearing under treatment" (p. 90). As to the causation of this class of murmur, he asks, "May it be, that defect in the condition of the elastic tissue, which exists in the valves, allows of their eversion into the auricle? Or, again, is it possible that the innervation of the auriculo-ventricular valves may be disordered so as to impede their closure?" (p. 90). In addition to these two classes of inorganic murmur, he, like Hope, also believed that dilatation might lead to "insufficiency of either auriculo-ventricular valve independently of structural disease, or even dynamic imperfection, in itself" (p. 311), and that murmur might result, "of course, always regurgitant." But he also saw that, even with incompetency, murmur does not always exist, as its presence is affected by the strength of the ventricles (p. 314 *et seq.*). The foregoing will remove the ambiguity conveyed by Dr Balfour's application of Walshe's saying, that "the doctrine of some observers, that the blood murmur may be systolic in time and seated at the apex, appears to me wholly untenable; how deficiency of red particles in the blood can lead to its reflux through the mitral orifice I am at a loss to conceive." It is evident what Walshe really meant, and what he considered "inconceivable," I do not ally myself with Dr Balfour in saying is "indisputable." On the other hand, should Dr Balfour be pleased to reconsider the historical position on the foregoing lines, he, too, I should think, will find himself in closer union with the past than he seems inclined or wishful to believe.

The same line of fact could be illustrated from Stokes, and, with certain marked advances, from Hayden. Hughes was the first, I think, to refer the hæmic murmur to the pulmonary artery. Parrot was the first to attribute it to tricuspid regurgitation. With these it is not my present purpose to deal, but they will in due time get the credit due to them.

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[1] *Diseases of the Heart and Great Vessels*, London, 1873, p. 86,

Dr Balfour's advance on all this is, that the regurgitant murmur of slight dilatation is carried into the left auricular appendix, and heard to what he supposes is the left of the pulmonary artery. Whether he has given up all belief in hæmic bruits it is at times difficult to be quite sure, for he speaks of a "dilated heart with hæmic murmurs,"[1] and also of "large blood-waves"[2] producing pulmonary and aortic murmurs, and then grandiloquently denounces such ideas as "contradicted by every fact in nature,"[3] and so forth.

There are several minor points in Dr Balfour's paper so evidently intended only to add pungency to criticism, or so purely polemical in spirit, that it will be unnecessary to allude to them. Other points, however, demand consideration, and it will be my endeavour to represent Dr Balfour's position with the utmost fairness and accuracy, and at the same time with that courtesy which ought to be the spontaneous accompaniment of honest inquiry, and which, Dr Balfour seems to forget, adorns eminence.

Dr Balfour says, I object to the "primary basic portion of the hæmic murmur being looked upon as transmitted through the auricle,"—

I. "*Because he has never seen an auricle so enlarged as to warrant the belief that it is the cause of the pulsation claimed for it.*" Dr Balfour must be perfectly aware that this was not my contention. I drew a distinct line between the auricle and its appendix, and put aside as untenable the idea that the murmur could be conveyed direct from the auricle without the aid of the appendix. This, I believe, was Dr Balfour's position; but, had I only his reply to me as a guide, it might be legitimately assumed he had conferred privileges on the auricle similar to those he wishes to bestow upon its appendix. It would therefore be more accurate, and might prevent misunderstanding, to say appendix when it is meant, and not refer to both it and the auricle by the same name. Even in a smaller experience, I too can "speak with perfect confidence in regard to an auricular enlargement;" but, I repeat, "pathological anatomy has yet to show us to what extent the appendix shares, even in cases of organic disease, in the dilatation of its companion auricle, and in which of its diameters the dilatation occurs." I maintain this position; and, although Dr Balfour has made himself the English apostle of Naunyn's theory, I fail to discover that he has recorded any post-mortem observations on this point which might aid the profession in accepting what has therefore remained, in this country, a clinical theory, more exciting curiosity than obtaining adherence. I certainly did take the liberty of stating that my own observations "led me to believe that when it (the appendix) is enlarged, the enlargement is more transversely than longitudinally," that is, in width more than in length. It is not even desirable Dr Balfour should accept this as an axiom, but, notwithstanding his strong expression of opinion, it indicates one direction in which observations have yet to be made. And the auricular theory (if Dr Balfour still holds it depends upon the appendix) will be greatly affected by the result, as it will be difficult for its advocates to maintain that more than the tip of the appendix reaches the chest wall, and it will certainly be interesting if Dr Balfour succeeds in proving that the appendix may be so enlarged as to have its tip pulsating in the second and third spaces. But even if this were proved, there is still another and more important direction in which observations have to be made, and that is, the position the various parts of the heart bear to the thoracic wall under morbid conditions, and how those alterations affect the position of the left appendix. I illustrated, what I believe to be the nature of those changes, in the dilatation due to great debility, by one post-mortem record; and, as Dr Balfour cavils at the limited number of my corroborative cases, he will be pleased to know that, since his paper was written, I have made two post-mortem examinations in cases of pernicious anæmia which fully support my contention. These cases, along with a series of clinical observations and tracings from cases which have been under my care since that date, will, I hope, be published shortly; and I am sure the profession will await with interest the record of some cases from Dr Balfour's large experience in which observations have been made in the necessary manner, for in his published works one fails to find any indication of observations having been made with the heart *in situ.*

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[1] *Edin. Med. Journal*, Sept. 1882, p. 198.
[2] *Brit. Med. Journal*, 1882, vol. ii. p. 353.
[3] *Edin. Med. Journal*, Sept. 1882, p. 194.

Dr Balfour says I am "not justified in stating that even in mitral stenosis such an enlargement of the auricle is 'not only not observed,' but is a 'pure assumption.'" It is only necessary to refer him to my paper to see that it contains no such statement either about the auricle or its appendix.

My observations as to the position of the appendix "even in health" so entirely agree with those of the authorities, that I place the greater confidence in those made in abnormal conditions; and, in this relation, it might be instructive to know if Dr Balfour really holds that the auricular appendix pushes itself up in front of the pulmonary artery, so as to lie on the anterior wall of its ostium and pulsate there.

Dr Balfour says that "the condition of the auricle, when permanently dilated, has been so long and so well known, that Stokes describes a temporary dulness, occupying the whole of the upper part of the left chest, as probably depending upon a sudden and excessive *dilatation of the left auricle.*" Stokes further says, what Dr Balfour omits, that such a case "of dulness proceeding from enlargement of the left auricle must be one of great rarity, and we have no demonstrative proof that the explanation of its attending circumstances was correct;"[1] and he certainly did not recognise "pulsation in the second and third left interspaces," with "percussion dulness in the second left interspace,"[2] as indicative of dilatation of the left auricle. On the contrary, he says, "I have already remarked on the difficulty which the anatomical position of the left auricle offers in any attempt to discover its enlargement by physical signs. This condition can only be inferred," etc.[3] Schrœtter says, "The left auricle is so hidden out of reach, that when it is dilated there are no signs which can be recognised by percussion."[4] And Dr Balfour's distinguished pupil, Dr Gibson, says, "The left auricle cannot in the same way give evidence of its condition; and, moreover, being deeply buried behind the ventricles and great vessels, changes of size are almost beyond the possibility of detection."[5] So Dr Balfour has not all the authorities with him even in this matter.

II. *Dr Balfour's objections to my Case No. II. now demand consideration. First,* He thinks there may have been a preternaturally short *appendix auriculi.* There was not; and if Dr Balfour will consider the statement that the heart had to be turned upwards to bring the appendix into view, he may form some idea of the length necessary to bring it to a level with the anterior aspect of the heart. *Second,* He thinks the appendix or its auricle might have been in a condition of concentric hypertrophy. They were not. Dr Balfour acknowledges that this condition of the auricle is only of "occasional occurrence," and I should doubt its possibility in such cases as pernicious anæmia, where we find the cardiac muscle relaxed and almost flabby. *Third,* He thinks the case imperfectly narrated. Its clinical career is so, as I acknowledged previously. The clinical notes, of which I only gave the points connected with the heart bearing on the subject in hand, were taken when the patient was admitted; for the seven days he was in hospital I have retained no notes. The post-mortem record contained all that affected the auricular theory, and was absolutely correct. Dr Balfour thinks the case proved nothing. I make bold to assert it proved that, in a case with pulsation and bruit in the second left space, the auricular appendix was far removed from the chest wall, and that the pulsation, percussion-dulness, and bruit were respectively seen and heard over the conus arteriosus. *Fourth,* He says, "An enlargement of the heart upwards from the fifth interspace to the second rib is so altogether contrary to experience that it ought to have been verified by careful measurement, and in the absence of this verification it cannot, I fear, be accepted." I am so surprised at Dr Balfour making this statement, that I have hesitated to accept it seriously. If it be meant seriously, all I can say is, that should Dr Balfour begin to make observations with the heart *in situ,* he will satisfy himself that this is not an uncommon condition, and also that it is unnecessary to wander into the depths of the chest for the cause of pulsation and percussion-dulness in the second and third spaces one inch from the sternum. I may, however, further refer him to his own Cases XX. and XXI., which he must have forgotten, and in both of which the apex was in the fifth space, and the upper limit of cardiac dulness began at the second rib.[1] *Fifth,* He thinks the case is one of "dilated heart with hæmic murmurs." I have already referred to this as being one of the statements which make Dr Balfour's precise position doubtful. If he means it is a case of anæmic heart with dilatation murmurs, I have the honour of agreeing with him. *Sixth,* He holds the post-mortem phenomena were exceptional. I am not surprised at this, if he seriously holds to his fourth objection. I take the liberty of differing from him, and regarding them as typical, and have already referred to two other cases lately seen by me which fully warrant this position.

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[1] *Diseases of the Heart and the Aorta,* Dublin, 1854, p. 273 *et seq.*
[2] Dr Balfour, *Edin. Med. Journal,* Sept. 1882, p. 196.
[3] *Ibid.,* p. 273.
[4] Ziemssen's *Cyclopædia of the Practice of Medicine,* vol. vi. p. 213.
[5] *Edin. Med. Journal,* Aug. 1882, p. 127.

III. As to the tone of the murmur, when Dr Balfour says a "frictional hæmic murmur is alike unknown and incomprehensible," he is, of course, perfectly aware that friction was supposed to have a great deal to do with hæmic murmurs. But this is perhaps only one of his polemical efforts, and I am sure he agrees with Stokes that "every practical man knows that, both in the heart and aorta, organic murmurs may be low and soft, and that inorganic murmurs are occasionally harsh, loud, or musical."[2] And his experience cannot, surely, have been so unique as to lead him to differ from Sibson, who says "the pulmonic bruit rarely presents a smooth, soft, bellows sound, but is usually grave and superficial. The murmur appeared as a peculiar scratching in one-half of the cases. It strongly suggested friction sound."[3]

IV. *Dr Balfour objects to my theory—First,* Because "any pressure exerted on the pulmonary artery by the left auricle must be exerted obliquely upwards and over a very limited area." I do not think the direction in which the pressure takes place, or the amount of artery pressed upon, materially affects the theory. As to the direction, however, of this pressure, it is only needful to remember that the pulmonary artery traverses the second left space, and that during ventricular systole its origin descends as low as the third space; and, for the position of the auricle, it is only necessary to use Walshe's statement, which is approvingly quoted by Dr Balfour, that "the middle point of this auricle from above downwards corresponds to the cartilage of the third rib; the auricle encroaches to a variable extent on the second and third interspaces." Sibson places the upper limit of the auricle, as seen from behind, at a level with the bifurcation of the pulmonary artery. *Second,* "To gain a fulcrum from which to act, the left auricle must be so dilated as to rest upon the vertebræ, and must thus compress both the œsophagus and the descending aorta." In reply, the following, from Sibson, may be quoted, with which I should have thought Dr Balfour would have been familiar:—"It is evident that in the recumbent posture, and during the ventricular systole, the heart would press backwards upon the œsophagus and the descending aorta, so as to render swallowing difficult, and to interfere with the flow of blood to the lower part of the body, unless the heart were supported by some special contrivance. Such support is to be found in the walls of the pericardial sac." After describing its attachments, etc., he continues, "In virtue of this arrangement the posterior wall of the pericardium supports the heart forwards, and prevents it from making pressure upon the aorta and œsophagus, where they are situated immediately behind the left auricle and the base of the left ventricle."[1] *Third,* "In order that the pulmonary artery may be sufficiently constricted to give rise to a murmur during the ventricular systole, it is necessary to suppose that there is a (minimum) pressure within the left auricle, during its diastole, greater than that within the pulmonary artery at its maximum. But it is obviously impossible that the circulation could be carried on under these conditions." This, with the word I have bracketed omitted, is a precise statement of the conditions necessary to the theory. The conclusion, I take the liberty of saying, is inconsistent with our knowledge; and I shall endeavour, before entering on the first part of the question, to prove this. Could the pulmonary circulation be represented by a single tube with a force-pump at one end driving its contained fluid in a given direction, it is evident that the application of a more powerful pump at the other end would reverse the current, and end in rupture of the connecting-tube or derangement of the first pump. This, however, does not represent the conditions under which the circulation is carried on. The blood leaves the right ventricle with considerable force, but this force, as is well enough known, is nearly quite lost by subdivision and friction before the stream reaches the left auricle. Had we, then, a force acting *through* the auricle, even much greater than that of the right ventricle, this force also would be so largely lost by the time it reached the pulmonary artery that it would be easily overcome by the power of the right ventricle. This practically throws the struggle upon the smaller vessels, and the length of time they resist this is seen in mitral stenosis, where pulmonary apoplexy is not an early condition of the affection. This might be further illustrated by Dr Balfour's own opinion that it takes "many years" before this dilating force reaches the pulmonary artery sufficiently to lead to its permanent dilatation;[1] but as this matter is receiving attention from other and abler hands, I only refer to it in passing. Were the right ventricle and left auricle (or the force acting through it) pumps which allowed their contained fluid only to flow in one direction, so that we had a cumulative force, the stronger would speedily win, and the force acting *through* the left auricle would overcome the force of the right ventricle, and would lead to reversal of current and other accidents. But in the heart there is a provision against the speedy development of this cumulative action, by each cavity being so constructed as to allow its contents to escape in two directions; and in the case of the left auricle the conditions are such that, during its systole, it *must* pass on a certain amount of blood from the surcharged pulmonary vessels for the use of the systemic system; and this regular relief, even when followed by a large amount of regurgitation, is sufficient to postpone the block which ultimately occurs in abnormal conditions with valvular derangement. It is also to be remembered that the respiratory movements exert a powerful influence on the circulation, and must aid considerably in postponing a block. And the influence thus exerted by respiration still further removes the circulation from any close analogy between it and an elementary arrangement of tubes and contracting reservoirs. The question, then, arises as to what force may act *through* the left auricle, and is it greater than that of the right ventricle? Take mitral regurgitation: there a stream, at times of considerable magnitude, passes back into the auricle with all the force exerted by the systole of the left ventricle; and, as we cannot assume the left auricle to be a vacuum ready to receive this regurgitating stream, there must be a backward flow through it, nearly as much greater in force than the flow in the pulmonary artery as the systole of the left ventricle is greater than the right, so that there are here conditions which, according to Dr Balfour's conclusion, would make the circulation obviously impossible; and yet no one knows better than he does that it takes some time to bring matters to a standstill. The next question to consider is, whether the tension in the left auricle is greater than that in the pulmonary artery at the moment of ventricular systole. To have clearly in view what takes place in the heart, I may quote Dr Balfour's words, that "in the normal condition of the auriculo-ventricular valves the diastole is complete at once, the blood not so much flowing freely into the ventricles as closely following in a liquid mass the recession of their walls, for, of course, there is in the heart no vacuous cavity or air-filled space into which the blood can be, strictly speaking, said to flow."[2]

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[1] *Diseases of the Heart and Aorta,* 1st edition, p. 200 *et seq.*

[2] *Op. cit.*, pp. 495-6. [3] Reynolds's *System of Medicine,* vol. iv. p. 488.

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[1] Reynolds's *System of Medicine,* vol iv. pp. 92-3.

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[1] *Brit. Medical Journal*, 1882, vol. ii. p. 522.

[2] *Diseases of the Heart*, first edition, p. 121.

This is, of course, equally applicable to the left auricle, and it is important to remember that its "diastole is complete at once." When there is regurgitation into it its tension must be immediately increased; and I again seek Dr Balfour's support, who, when explaining the manner in which the mitral regurgitant murmur is propagated through the auricle into its appendix, says, "These vibrations readily pass with the fluid veins to the wall of the left auricle on which they impinge, and the auricular wall being already somewhat tense from unusual dilatation, ... these vibrations are readily transmitted to it."[1] According to this showing,—and I only use Dr Balfour's own statements,—the auricle, at the moment of ventricular systole, is not only full, but "somewhat tense from unusual dilatation." It thus only remains to be seen what this tension really is. When it is remembered that there is not only a column of blood sent with the force of the left ventricle into this tense auricle, but also that the mitral cusps, instead of being held well down into the ventricle and presenting a concavity towards the auricle, so as thereby to relieve the auricle and "make room for the returning blood without hindrance,"[2] must, on the contrary, owing to the enfeebled state of the papillary muscles, be allowed greater latitude of movement towards the auricle, it must be granted that the auricular tension bears a fixed relation to the strength of the left ventricle, and is therefore greater than that in the pulmonary artery.

That Dr Balfour's picture of the sequence of events in the auricle is accurate, is practically demonstrated to us by what is observed in tricuspid insufficiency with jugular reflux, where the systole of the ventricle is seen at once to lead to a distensile wave of considerable magnitude in the external jugular vein. That the regurgitating stream throws its first and greatest dilating power upon the auricle may, without appealing to the laws of physics for support, be inferred from the simple observation that the reflux wave rapidly lessens in its backward course along the veins until it is practically lost at a comparatively short distance from the heart.

ARTICLE III.—*A Case of Poisoning by Hydrochloric Acid and Chloride of Zinc.* By J. MAXWELL ROSS, M.A., M.B.

THIS case came under my notice while acting as surgeon of police for Dr Littlejohn in the month of September, and by his kindness I am enabled to publish it.

On Thursday, 7th September, about 7.30 P.M., W. C., a man residing at Gibb's Entry, gave information at the police office of his wife's sudden death, which he believed to be due to poisoning by spirit of salt. Detective Frew went with him at once to his house to investigate. The result of his inquiries was to the effect that Mrs C., who was twenty-nine years of age and six years married, had recently given way to drink, and had been heard on several occasions threatening to commit suicide; that on the previous day, after a quarrel with her step-daughter (a girl of seventeen), she left her house and did not return till that forenoon; that her daughter then went to a neighbour's house, and, on looking back between 2 and 3 P.M., saw her in the passage apparently drunk; that in consequence she did not go into the house, but returned about 4.30 with the neighbour. They found the deceased lying on the floor, vomiting, purging, and apparently very ill. She was then conscious, and complained of very great pain in the region of the stomach. She also informed them that she had drunk part of the contents of a bottle which she pointed out to them. As they were ignorant of the nature of the fluid, they took it to a doctor, who is said to have analyzed it and pronounced it to be black wash. He told them if the woman was vomiting it was all right; but if not, to come back and he would give them an emetic for her. Her husband, coming home between 6 and 7, found his wife as above described, with the exception that she was unconscious, and, on being shown the bottle, recognised it as one that he had got two or three years before for soldering purposes. He had been informed that it contained spirit of salt, which he knew to be a poison, and had removed it to a neighbour's house some months previously when he heard his wife threaten to commit suicide. He was not aware that it had been brought back. He sent at once for a doctor, but death intervened before one came.

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[1] *Lancet*, 1877, vol. ii. p. 385.

[2] Gibson, following Pettigrew, *Edin. Med. Journal*, Aug. 1882, p. 122.

The officer, after searching for other articles regarding which there might be suspicion, took possession of the bottle with its contents, and ordered the removal of the body to the police mortuary.

The bottle was handed over to me on the following day. It was one capable of containing about sixteen fluid ounces, and was said to have been at least two-thirds full before she drank of it. About half an ounce of fluid containing some dark particles in suspension was left at the bottom. This had an odour not unlike that of naphtha. A number of dark particles similar to those suspended in the fluid adhered to the inside of the bottle, and gave it a dirty appearance.

On making further inquiries I found that the officer had not seen any of the vomit, it having been wiped up before his arrival. The neighbour and step-daughter who first saw her stated that it was small in quantity, white and frothy. There was no blood nor dark-coloured matter in it. Though the vomit was small, the retching was frequent. The purging occurred once or twice, and the stools were loose but natural.

An examination of the body was made on 10th September, sixty-four hours after death.

External Appearances.—Body was that of a young woman, fairly well nourished. The colour of the anterior surface was generally pale, with the exception of the hands, which were of a dark purple. Posteriorly it was of an almost uniform red. The abdominal striæ were well marked, and several of them had the pink colour which is said to be characteristic of recent pregnancy. Rigor mortis was just beginning to pass off. Pupils were semi-dilated. There was no appearance of putrefaction going on in any part of the body.

Internal Examination.—The usual incision in the middle line was made, and the abdominal cavity first opened. As this was done a strong spirituous odour was felt. The viscera were inspected *in situ* before the thorax was opened. There was no peritonitis, and no foreign material in the peritoneal cavity, but there was considerable venous engorgement of the parietes opposite the stomach.

I. *Thorax.*—The examination of this cavity was then proceeded with.

Pericardial sac contained a small quantity of serum.

Heart was first examined *in situ.* There was no abnormality on the surface. The right side was very flaccid. It was then removed and cut into. A small quantity of dark fluid blood escaped from the right side. The left heart was empty. Valves were competent and unaffected by disease. The muscle appeared to be well nourished. There were one or two patches of commencing atheroma on the ascending portion of the aorta.

Lungs.—On the right side there was nearly an ounce of serum in the pleural cavity. There were a few old adhesions in the upper portion of the sac. The lower lobe of the lung was slightly congested; otherwise it appeared to be healthy. The left side was in a similar condition, with the exception that there were no adhesions of the pleura. The *windpipe* showed traces of congestion, but none of injury such as would occur from corrosive poisoning.

II. *Abdomen.*—The *liver* was adherent to the diaphragm. It weighed 3 lbs. 9 oz., and was slightly fatty. The gall-bladder was distended with bile.

Stomach was ligatured at each end and removed. There was great venous engorgement of its walls, but no perforation. Its contents, which were chiefly fluid but partly solid, and had an odour corresponding to that of the liquid handed to me, filled a 12 oz. bottle. The inner surface of the viscus was washed gently to get rid of one or two particles of undigested food that adhered to it. On spreading it out it presented an appearance that might be described as a division of it into two nearly equal zones. One of these occupied the greater curvature and extended on either side of it half-way towards the lesser. The other occupied the lesser curvature, the cardiac and pyloric orifices, and the remainder of the stomach walls. In this latter portion the mucous membrane was in great part destroyed, and scattered pretty thickly over the surface left was a multitude of minute extravasations like grains of cayenne pepper. In the other portion the mucous membrane had not been removed, but was much swollen and juicy. Over its surface ran a number of dark lines of extravasation in a direction irregularly parallel with that of the long axis of the greater curvature, making this portion of the stomach appear "striped like a leopard's skin." The pylorus was thickened.

Intestines.—The small intestines were laid open on the opposite side from the mesentery. They contained a quantity of food in process of digestion. The naphthous-like odour observed in the bottle which contained the poison, and in the contents of the stomach, was distinctly perceived as low down as the commencement of the ileum, and indistinctly for some distance below that. The valvulæ conniventes were very prominent, but there was no appearance of injury from the poison.

Gullet was white and opaque, as were also the tongue and fauces.

The other abdominal organs presented no appearance of either injury or disease. The uterus was unimpregnated.

III. *Head.*—The vessels at the vertex of the brain were somewhat full, and one or two small opacities of the arachnoid were to be seen. Otherwise the brain seemed healthy.

An examination was subsequently made both of the suspected liquid and the contents of the stomach. Each gave an intensely acid reaction, and on testing with nitrate of silver a white precipitate, insoluble in boiling nitric acid, but soluble in ammonia, showed the presence of a large quantity of hydrochloric acid. Knowing that it is customary to add a small quantity of zinc to the acid when used for soldering purposes, I had both fluids examined for this metal, and had the satisfaction of finding it present in considerable amount. The addition of some zinc strips to hydrochloric acid gave a liquid similar in appearance to that I received from the detective, and containing the same black particles. The intensely acid reaction given by the fluids examined showed that there was free acid, while the zinc must have been present as a chloride. A microscopical examination showed a large number of blood-cells, mucous corpuscles, portions of the mucous membrane of the stomach, and granular *débris.*

ARTICLE IV.—*The Examination of Deaf-Mutes.* By Dr KIRK DUNCANSON, Lecturer on Diseases of the Ear, School of Medicine, Edinburgh.

IN the tabulated results of my examination of deaf-mutes given below, the following abbreviations occur:—Aur. = auricle; E.A.M.

or meat. = external auditory meatus; M.T. = membrana tympani or drumhead; Tymp.=tympanum or tympanic cavity; E.T. or Eust. Tube = Eustachian Tube; T. = teeth; V. = vertex; R. = right; L. = left; per. or perfor. = perforation.

The bones on which the vibrating tuning-fork or watch were most frequently placed were the mastoid and temporal bones, including the zygoma, and the fronto-temporal articulation, supra-orbital, the vertex, and the occipital protuberance, and in all cases along with the mastoid processes the teeth closed. Frequently the separate jaws were tried, and the lower was found much the better conductor.

The tuning-forks (vib. T.-F. = vibrating tuning-fork) used were those of König of Paris, such as, Mi_3, 640 vibrations per second, or V.S., Sol_3, 768 V.S., Ut_4, 1024 V.S., etc.

The watch used could be heard by a normal ear at 30 in. distance, may be thus stated $\frac{30''}{30''} : \frac{2}{30''}$, meaning a watch heard at 30 in. by a normal ear was in the ear examined heard at 2 in. only. $\frac{P.}{30''}$ denotes that the watch was pressed upon the auricle; $\frac{C.}{30''}$ that it was simply in contact when heard by that special ear under examination, when a normal ear would have heard it at 30 in. distance. The P. or C. may be followed by + or —, meaning increased or diminished pressure or contact.

The Politzer's hammer can be heard by normal hearing ears at a distance of 10 feet. Of course, these measurements are taken in a quiet room, removed from any noise or disturbance. I now generally use the Politzer's hammer, finding it much more convenient for testing the hearing power both by aerial and bone conduction. Aerial conduction means that the sound-waves are conveyed to the organ of hearing through the air; bony conduction when the sound-waves are conveyed through the bones. The vibrating tuning-fork, the Politzer's hammer, and the watch are all adapted, and can be suitably employed in testing the hearing power by bone conduction. In testing the hearing power for aerial conduction, the human voice is best suited: whistles, pitch-pipes, organ-pipes, bells, and those given above for bone conduction, can all be used. The boy or girl whose hearing power for aerial conduction is being tested is placed, with the eyes closed, in front of and with their back to the examiner. In the cases given below, seldom were they at a greater distance than 4 or 5 feet from the party speaking in a high, low, or medium tone, or shouting. To avoid deception, the watch would be stopped, or the Politzer's hammer not struck, or the tuning-fork, whilst making a pretence of striking it, would not be set into vibrations. The wind instrument would not be sounded, and the lips and face made to look as if speaking, whilst no sound was made. Thus we could distinguish whether it was actual sound-waves or not which were making an impression on the organ of hearing of the child under examination. The deaf-mutes are extremely sensitive, and happily it is so when they are being taught lip-reading and articulation, as many of those I have examined were.

The amount of hearing power shown by the deaf-mutes for one or other set of tests, often for both, astonished all who witnessed the examinations; but it must not be understood that any one of the deaf-mutes was capable of hearing so as to act upon any of the sounds of everyday life.

The intelligence, kindness, and sympathy existing between the deaf-mutes and their teachers and all having to do with them, draws forth the highest admiration and gratitude.

I give the definition of deaf-mute proposed by Hill,[1] as still essentially useful. A child must be regarded as deaf and dumb (*a.*) when it has reached its second or third year without making any attempt to imitate spoken language, but, on the contrary, strives to make itself understood merely by gestures aided by rude voice sounds; (*b.*) provided always it has not been disturbed in its general development, during the above-mentioned time, by a severe illness; (*c.*) provided also that, by its whole bearing, by its complete absence of interest, it does not show itself as imbecile; (*d.*) when its eyes are very mobile and unsteady, and when it can be remarked that the child does not observe persons and things until it sees them; (*e.*) when it betrays neither in its waking nor sleeping condition any capability of being affected by sounds.

The task of the statistics of deaf-muteism is not by any means merely to reckon the number of the unfortunate beings afflicted with the malady in question, but also (and this I consider their principal object) to investigate, as far as it is possible, the causes of deaf-muteism, and to endeavour to state them with precision. They are thus helpful to public hygiene and to sanitary police, which, on their part, must endeavour to turn to account the results so obtained and make them fruitful, in order that everywhere and gradually the number of those who are afflicted with this dire calamity may become smaller and smaller,—a calamity whereby one of the most important and noblest senses never reaches development, or rather is early lost, and by its absence prevents development of speech. But even for those who are visited with this terrible affliction, the branch of statistics which refers to them is no fruitless labour. It cannot, indeed, help them all by relieving them entirely of the burden which fate has laid upon them in their particular form of suffering, but it can lighten this burden for many among them, and already, in this direction, many indications have been given (*Wilhelmi*).[2]

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[1] *Die Geistlichen und Schullehrer in Dienste der Taubstummen*, Weimar, 1868.

[2] "Statistik der Taubstummen des Regierungsbezirks Magdeburg nach der Volkszählung von 1871," von Dr med. B. T. Wilhelmi, *Deutsche Klinik*, 1873, 9-11. Georg. Reiner, in Berlin.

EXAMINATION OF DEAF-MUTES.

No.	Name and Birthplace.	Age.	Cause.		Condition			Hearing Power.		Family History and General Observations.
			Congenital.	Acquired.	Of the Drumhead, E.M.A., and Auricle, etc.	Of the Nose.	Of the Pharynx.	Bone Conduction.	Aerial Conduction.	
1.	Alexandra W. T., Edinburgh.	9½	Cong.		Deep driven in; is curved from post. to ant.	Normal.	Normal.	Vib. T.-F. Mi$_3$ and Politzer's hammer in both.	Politzer's hammer doubtful in front.	Father and mother are deaf-mutes. Father's father and mother, brother, and uncle D.-Ms. Mother's father and mother; two brothers, and one sister D.-Ms.
2.	Marion M., Lairg.	10	Cong.		Normal; healthy cerumen in E.M.As.	Normal.	Normal.	Good.	Certain.	Two brothers D.-Ms.
3.	Jane M., Motherwell.	9	Cong.		Plug of cotton-wool in L.E.M.A. with perfor. in L.M.T.; R.M.T. driven in.	Normal.	Normal.	Good.	Good.	One brother, one sister, D.-Ms.
4.	Helen R., Kilconquhar.	9	Cong.		M.Ts. deep, dull white. Opaque malleus.	Normal.	Large tonsils.	Very good.	Good.	One elder sister D.M.
5.	Margt. C., Gauldie, Arbroath.	9	Cong.		M.Ts. deep, opaque. Cerumen in meatus. No distinct lobe.	Normal.	Normal.	Fair.	Pretty good.	Has fair hair and good teeth. No other D.-Ms. in family.
6.	Mary M., Old Monkland.	9	Cong.		Deep opaque malleus. Cerumen in L. meatus; large antitragus comparatively.	Normal.	Normal.	Good.	Good.	Has slightly serrated teeth.
7.	Marian M., New Kilpatrick.	9	Cong.		More developed malleus.	Normal.	Normal.	Fairly good.		Teeth good. No others D.-M.
8.	Margaret P. L., Liverpool.	9		Acquired.	Malleus more central in both. Large auricles. No perfors.	Normal.	Normal.	Good.	Very good; hears whistle.	Lost speech and hearing after scarlet fever. Teeth good.
9.	Helen M'I. B., Riccarton.	8½	Cong.		M.Ts. very well developed. Malleus handle. Colour whitish. Lustre dim, but well shaped. Transparency gone.	Normal.	Normal.	Very good.	Very good.	Teeth good. No family history.
10.	Cecilia C., West Wemyss.	8½	Cong.		M.Ts. well developed. Malleus handle. Lustre dull. Light cone best.	Normal.	Normal.	Very good.	Very good.	Teeth good. One brother D.-M.
11.	Allison A. H., Edinburgh.	9½	Cong.		Meatus narrow in both. M.T., acute angle of both to front; dull, white, opaque. No malleus handle.	Normal.	Normal.	Doubtful.	Totally lost.	Teeth good. Two sisters D.-Ms.
12.	Mary A., Helton, Roxburgh.	8½		Acquired.	M.Ts. dull, opaque white; both well developed. Malleus handle prominent in R. post fold of Shrapnell's pouches, protruding. White, chalky deposit in L. posteriorly.	Normal.	Normal. L. tonsil inflamed patchy-looking.	Good.	Good.	Teeth good. Only member D.-M. Hearing supposed to have been lost by a fall. Supposed to have heard till two months of age.

13.	Agnes L., Partick.	9	Cong.		M.T. red streak on pouches and post. border of malleus handle. Cone slightly bright. Lustre dim, opaque.	Normal.	Normal.	Good.	Fairly good. Does not hear whistle.	Teeth good. No other member of family D.-M.
14.	Margaret G. R., Kilconquhar.	9	Cong.		In R. bony-looking growth in tympanum at lower part, pressing forward M.T. slightly. In L. very good malleus, handle short. Lustre and light cone slight.	Normal.	Tonsils slightly enlarged.	Good. Politzer's hammer and vib. T.-F. Mi_3.	Pretty good.	Teeth good. One sister, younger, D.-M.
15.	Helen C. S., New Prestwick.	9	Cong.		M.Ts. well marked in both. White streaks. Lustre and light cone good. Aur. small and well made.	Normal.	Normal.	Fair. Hears from bones and by aerial conduction Politzer's hammer and tuning-fork.	Fair.	Teeth good. No others in family. Speaks loudly, in a rather high-pitched voice. Internal strabismus of right eye.
16.	Jane W., Riccarton.	10		Acquired.	M.T. very good in R.; in L. more driven in. Malleus and short process prominent. Good lustre.	Normal.	Normal.	Good. Hears Politzer's hammer and tuning-fork in front and from bones.	Good.	Teeth good. No other in family. Lost from disease at four years of age.
17.	Isabella G., Buckie.	10	Cong.		M.Ts. well made. Lustre and light cone slight. Colour dull white in both.		Tonsils large. Mucous memb. soft, spongy.	Doubtful.	Doubtful.	Teeth good. Hydrocephalic head, and is very dull and stupid. Two brothers and one sister D.-Ms. Brother monomaniac. One cousin D.-M.
18.	Annie D., Glasgow.	10	Cong.		M.Ts. deep, pretty good. Cerumen in both E.M.As. Lustre and light cone slight.	Blocked up by enlarged bones.	Catarrhal.	Hears Politzer's hammer and tuning-fork.	Hears tuning-fork Mi_3.	Speaks with a nasal pronunciation. Good teeth. Small and rickety. Four of family besides herself were D.-Ms.
19.	Jane K., Fauldhouse.	10	Uncertain.		M.Ts. normal, dull, deep. Malleus distinct.	Normal.	Normal.	Pretty good. Politzer and T.-F. from mast.	Fair. Politzer and T.-F. in front of E.M.A.	Teeth good. Does not learn to speak. No others D.-M. in family. Has been deaf since one year of age, but not through disease.
20.	Cath. R., Tarbet, Ross-shire.	9	Cong.		M.Ts. deep, pale. Malleus handle. Lustre and light cone slight.	Normal.	Normal.	Fair. Politzer and T.-F. heard in both.	Fair. Does not hear Politzer and T.-F. so well in front of L. as in R.	Teeth good. One brother D.-M. died from consumption. Does not learn to speak.
21.	Mary B. G., Swinton.	9½	Cong.		M.Ts. deep, dull. No distinct markings; almost cicatricial-looking.	Normal.	Normal.	Fair. Politzer best in R.; T.-F. in both.	Fair. Neither Politzer nor T.-F. well in front.	Teeth separate and peggy. No other of family D.-M. Does not learn to speak. Internal strabismus of right eye; left eye also affected.
22.	Euph. A., Pathhead.	9½	Cong.		R.M.T. well marked. L. duller opaque, and more driven in. Lustre good.	Normal.	Slightly enlarged tonsils.	Good. Politzer and tuning-fork heard equally.	Good. Politzer and T.-F. equally in both ears.	Teeth good. Learns to speak; has a good voice. No other of family D.-M.
23.	Ellen L. T., Dundee.	9	Cong.		M.Ts. fairly developed. Malleus handle prominent. M.Ts. deep driven in. Small quantity of wax in L.	Normal.	Normal.	Vib. T.-F. Mi_3 best in right.	Hears Mr L. shouting in R., and repeats pretty fairly.	Father and mother D.-Ms. One brother and one sister, younger, D.-Ms.

EXAMINATION OF DEAF-MUTES.—*Continued.*

No.	Name and Birthplace.	Age	Cause.		Condition			Hearing power.		Family History and General Observations.
			Congenital.	Acquired.	Of the Drumhead, E.M.A., and Auricle, etc.	Of the Nose.	Of the Pharynx.	Bone Conduction.	Aerial Conduction.	
1.	John B., Wick.	9	Cong.		R.M.T. very normal-looking. L. much driven in, as if by an old, adherent, cicatrized perforation.	Normal.	Normal.	T.-F. and watch $\frac{0}{60}$'' very imperfectly.	Very imperfect.	Has an older brother deaf-mute. Much given to wet the bed. Suffers from chronic ophthalmia tarsi of both, right worst.
2.	Murdoch M., Edinburgh.	9		Acquired.	M.Ts. deep, small, but possess all the markings.	Normal.	Normal.	Hears watch $\frac{0}{60}$'' from teeth.	Hears pitch-pipe C., in R. best; hears a loud shrill whistle and a brass-band, but does not hear ordinary conversation.	Lost his hearing, when seventeen months old, from brain fever. Has loud noises in his left ear. Hears a high and low note shouted o' human voice.
3.	James H., Arbroath.	9	Cong.		M.Ts. very deep, not easily seen. Small, contracted, and no distinct markings. They look never to have vibrated.	Normal.	Normal.	Watch from teeth.	Hears pitch-pipe in R.; hears voice very badly.	
4.	William M., Nairn.	8	Cong.		M.Ts. deep, much driven in, never vibrated. Wax, slight accumulation in R.E.M.A.	Normal.	Normal.	Neither watch nor T.-F. heard.	Takes no notice of loudly shouted voice.	One brother, older, D.-M. was drowned One cousin D.-M. There is a history of deaf-muteism in family.
5.	James G., Kinross.	8½		Acq. from measles.	M.Ts. have a normal appearance. Malleus distinct in both.	Normal.	Normal.	Watch heard in neither.	Pitch-pipe C and A in both, best in R.	Father alive, mother dead; has no living brothers or sisters. Hears vowel sounds shouted in R. and repeats them. Teeth carious, peculiar.
6.	William M., Edinburgh.	8½		Acquired.	M.Ts. very normal in appearance. Malleus most marked in R. Lustre and light cone good in both, best in R.	Normal.	Normal.	Watch not heard; vib. T.-F. best heard in R.	Vib. T.-F. best heard in R., repeats vowels sounded in moderate voice in R. ear; imitates such words as Father; does not give full sounds.	Suffered from scarlet fever at three years, afterwards from whooping-cough and measles. He began to speak (in a way) when six and a half years old. Father says his deficiency was from his birth.
7.	Robert B., Dumbarton.	8½	Cong.		Both M.Ts. puckered, and seem as if they had once been perforated.	Normal.	Normal.	Hears vib. T.-F. from bones.	Vib. T.-F. best in front of left; hears a shrill whistle C.	Teeth bad, peggy. Right iris brown, left iris pale blue.

8.	Thomas A. W., Huntly.	8½	Cong.		Mastoid auricle and meatus normal. M.Ts. deep and small, atrophic.	Nasal catarrh.	Catarrh.	Does not hear vibrating T.-F., W., whistle, nor voice; none of the tests.		Vision very deficient. Limbs weak. With his eyes closed and heels together he stands firm, can resist a push. Has cousins in America D.-Ms. Two brothers, both younger, D.-Ms.
9.	Jos. H., Lerwick.	8½	Cong.		M.Ts. deep, not well seen, small, atrophic.	Normal.	Normal.	Hears no sounds. With his hand on Mr L.'s larynx repeats sounds.		Has one brother D.-M. Teeth good.
10.	David W., Kirkcaldy.	8½		Acquired.	Wax in both, most in R. M.Ts. pretty normal; look never to have vibrated.	Normal.	Normal.	Signs he hears vib. T.-F. in R., doubtful.		Said to have lost his hearing when one year old.
11.	James W., Edinburgh.	9	Cong.		Perforations in both M.Ts. Dried up discharge and epithelium in L. Aur. and mast. normal. E.M.As. swollen, narrow.	Normal.	Normal.	Hears Politzer's hammer and vib. T.-F. Mi$_3$ from bones, in L. best, R. also.		Parents say he was born dumb with imperfect hearing.
12.	Thomas P., Edinburgh.	9½	Cong.		M.Ts. very normal-looking; look as if they vibrated. Malleus handle distinct in both. Colour dull and opaque.	Normal.	Normal.	Hears Politzer's and vib. T.-F. well on bones, best in L.	Hears Politzer's and vib. T.-F. well in front. best in L.	Father and mother D.-Ms. One brother, older, and one sister, younger, D.-Ms.
13.	William S., St Andrews, Orkney.	10	Cong.		M.Ts. tense, much driven in; prominent manubria. Aur. and mast. normal. Slight cerumen in R.E.M.A.	Normal.	Normal.	Totally deaf.		
14.	Jno. S., Edinburgh.	9	Cong.		M.Ts. deep, small, not well developed. Aur. and mast. normal. E.M.As. narrow.	Normal.	Normal.	Hears Politzer's and vib. T.-F. in both.	Politzer's and vib. T.-F. in front of both.	Parents D.-Ms., but not related.
15.	Robert S., Leith.	9½		Acquired.	Epidermal plug in R. meat. M.T. dull, white, opaque. Effusion and adhesions in tympanum. Large cicatrized perforation in post. seg. of left. Malleus handle prominent.	Normal.	Normal.	Hears Politzer's and vib. T.-F. in both, best in R.	Did not hear vib. T.-F. in R. until ear was syringed.	Semi-Mute. Became deaf after fever. Speaks exceedingly well. A clever boy.
16.	Alexander G., Shotts.	10		Acquired.	M.Ts. white, opaque, deep. Normal markings not very distinct. E.M.As. narrow. Aur. and mast. normal.		Throat relaxed.	Vib. T.-F. in left.	Politzer's in front.	Lost his hearing from measles when eighteen months old. Learns to speak.
17.	James M., Perth.	9½	Cong.		M.Ts. not well seen from fluid wax in both. M.Ts. deep, tense, opaque. Mast. and meat. normal. Peculiar fawn-shaped auricles.	Normal.	Relaxed.	Hears vib. T.-F. from bones.		One brother, older, D.-M., at school; two brothers, younger, D.-Ms., at home. Parents have not a healthy appearance. The boy is very bony; dry, rough skin. Tears flowed from right eye on introducing speculum into ear of same side.

EXAMINATION OF DEAF-MUTES.—*Continued.*

No.	Name and Birthplace.	Age.	Cause.		Condition			Hearing Powers.		Family History and General Observations.
			Congenital.	Acquired.	Of the Drumhead, E.M.A., and Auricle, etc.	Of the Nose.	Of the Pharynx.	Bone Conduction.	Aerial Conduction.	
18.	Matthew H., Gilmerton.	9½	Cong.		Red, thickened post. sup. margin in both. Sclerosis of both tymp. Malleus handle very prominent, in R. especially.	Normal.	Normal.	Politzer's and vib. T.-F. Mi_3.	Politzer's and vib. T.-F. Mi_3.	His articulation is very defective. Mother sometimes knows what he says. Is being taught to speak distinctly. Molar teeth carious, front good.
19.	Andrew A. D., Inveresk.	9½	Cong.		M.Ts. not well seen. A little wax in R. meat. Aur., mast., and meat. normal.	Normal.	Normal.	Hears Politzer's and vib. T.-F. pretty well.	Politzer's and vib. T.-F. Mi_3.	Not totally deaf, but cannot understand what is said to him from imperfect hearing. Weeps very readily. One sister, older, the first-born of family, was D.-M.; now dead. Learns to speak.
20.	David M., Pennsylvania.	9½		Acquired.	M.Ts. very normal in appearance. R. dull, white, opaque; markings not so distinct as in L. Aur., meat., mast., normal.	Normal.	Normal.	Hears Politzer's and vib. T.-F., best in L.	Hears vib. T.-F. and Politzer's.	Deafness was discovered when eighteen months old. No disease given as cause. No other D.-Ms. in family. Nasal arch very flat.
21.	Alexander E., Birkenhead	9		Acquired.	Plug of wax in both meat. M.Ts. pretty normal.	Is at present convalescing from mumps; left tonsil and parotid large.		W. $\frac{P.—}{30''}$ in both; vib. T.-F.	Vib. T.-F.; hears loud voice very well.	Deafness arose from meningitis at one year old. No deaf-mutes in the family. Speaks very well, and reads teacher's lips well.
22.	Isaac C., Perth.	11	Cong.		Epidermal masses in both meats. M.Ts. soft, bleached; ulcers on both. Aur. and mast. normal.	Normal.	Normal.	W. $\frac{P.}{30''}$; vib. T.-F. best in left.	Voice, high note, shouted, in R. best.	No relations D.-Ms. Learns to speak; has a good voice. Has an otorrhœa from both ears.
23.	George S., Fraserburgh.	11	Cong.		M.Ts. deep, dull, opaque. Normal markings not distinct. Aur., mast., and meat. normal.	Normal.	Normal.	Vib. T.-F. in left apparently best.	Hears high shouted note in L.	No relations D.-Ms.
24.	Daniel M., Dalziel.	11	Cong.		M.Ts. slatey-blue colour in both, deep. Aur. and mast. normal. E.A.Ms. dry, but healthy.	Normal.	Normal.	Hears W. and vib. T.-F., best in R.	Hears high and low notes ā ǎ ĭ in R.	Two brothers and one sister D.-Ms. Has a fine healthy set of teeth.
25.	James P., Govan.	12		Acquired.	M.Ts. deep, pale, thin, atrophic.	Normal.	Normal.	W. $\frac{C.}{30''}$ and vib. T.-F. from teeth, mast., etc.	Hears W. and vib. T.-F. in front; voice in high and low note in R.	Cause of deafness, "water in the head" when nine months old. Teeth peggy. An only child. Very delicate.

26.	William D., Balmerino.	12	Cong.		M.Ts. dull, deep. Shrapnell's pouches prominent, full.	Normal.	Normal.	Vib. T.-F. heard well in both.	Hears high note in R.; vib. T.-F. barely.	One sister and one cousin D.-Ms. A sturdy boy, fond of games.
27.	James W., Castlecairney.	12		Acquired.	M.Ts. not well seen in R. Perfor. L. deep, opaque, small. Aur. and mast. normal. Discharge in E.A.M.	Normal.	Normal.	W. on mast.; vib. T.-F. on bones in L.	Vib. T.-F. in front of R.; hears loud high and low notes in R.	Hearing lost at four years; not stated what from.
28.	Andrew A., Bathgate.	12		Acquired.	Both M.Ts. red, soft, swollen, perforated. Aur., mast., and E.A.Ms. normal.	Normal.	Normal.	Vib. T.-F. Sol_3 from bones, best in R.	Does not hear vib. T.-F., nor W., nor shouting.	Lost his hearing from scarlet fever at four years of age.
29.	James S., Forfar.	12	Cong.		M.Ts. deep, but normal-looking, small. Vessels of manubrium injected. Aur., mast., and E.A.Ms. normal.	Normal.	Normal.	Vib. T.-F. and W. $\frac{P.+}{30'}$ from bones and mast.	Vib. T.-F. in front; hears voice in medium pitch in R.	Has one brother D.-M.
30.	John B., St Colm's.	13	Cong.		M.Ts. very normal-looking. Aur., mast., and E.A.Ms. normal.	Normal.	Normal.	Vib. T.-F. in both.	W. not heard; hears hoarse, low pitch of voice in L.	One brother D.-M.
31.	David F., Forfar.	13	Cong.		M.Ts. have a chalky deposit in R; not well seen in L. Aur., mast., E.A.Ms. normal.	Normal.	Normal.	Vib. T.-F. $\frac{W.}{30}$ $\frac{P.++}{30}$ best in L.	Hears voice in loud low note in L.	
32.	Alexander F., Knockbain.	12	Cong.		Wax in both E.A.Ms. M.Ts. pretty normal-looking. Aur. mast. normal.	Normal.	Normal.	Feels vib. T.-F. in teeth and in stomach, best from right.	Voice in high and low note heard in right; hears voice better than vib. T.-F.	
33.	James S., Perth.	12	Cong.		M.Ts. not well seen in either. Aur. pendulous in both.	Normal.	Normal.	Hears W. $\frac{P.++}{30}$ and vib. T.-F. in both equally.	Hears low note shouted, best in R.	One brother and one sister D.-M. Hands very much congested. Circulation languid. Vaso-motor disturbance. Mother in lunatic asylum.
34.	Alexander A., Dundee.	13	Cong.		M.Ts. deep, dull, not well seen. Aur. small, well made, neat. E.A.Ms. small, narrow.	Normal.	R. tonsil large, hard.	Neither W. nor vib. T.-F. in R., but faintly in left.	Hears low note shouted in L.	His parents, three brothers, and one sister D.-Ms.
35.	John M., Perth.	10	Cong.		M.Ts. deep. Shrapnell's pouches full, prominent. Malleus handle foreshortened.	Naso-pharyngeal catarrh. Uvula double, adherent.		Vib. T.-F. from teeth.	Hears high and low note in R.	
36.	William S. Forfar.	9	Cong.		Wax in both E.A.Ms. M.Ts. deep. Vessels congested.	Normal.	Normal.	From teeth and bones, hears vib. T.-F. best in L.	Hears low note shouted in L.	One brother D.-M.
37.	Jno. F., Leith.	8	Cong.		M.Ts. deep. Circumference prominent.	Normal.	Catarrhal.	W. and vib. T.-F., best in L.	Hears low note shouted with left ear.	

ARTICLE V.—*Notes of two Midwifery Cases.* By JOHN BALFOUR, L.R.C.S. Ed., Leven, Fife.

I HAVE always been much interested in the numerous midwifery cases published in the medical journals,—anxious to see how others manage in the serious complications which must occur to all, and to gain hints for my own guidance. I now give as my own contribution the two following cases:—

Placenta Prævia.—Called on 5th August to a lady aged about 30, 5-para. Found her in a very nervous state, but with a good pulse. She stated that she considered herself to be *enciente*, and to have completed the seventh month. Lately she had been subject to occasional discharges of blood, clotted, small in quantity, and without pain. She had lost a little blood during the day, but the discharge had quite ceased. As she was very nervous I did not examine, but soothed her and promised to be available whenever she might call me. I saw her daily, and there was no particular call for interference until early on the morning of the 6th, when the nurse sent for me. I found that there had been a little draining of fluid during the night, and a rather increased discharge of clots. Examination p. v. showed the vagina largely dilated, the os uteri nearly the size of a florin, and quite dilatable, and the placenta extending all over the os, but thin on the right side. As soon as the necessary arrangements were completed, I put my patient under chloroform, passed my hand into the vagina, and soon after into the uterus, seized one foot and brought it down, and after the body had advanced, the other leg also was brought down. About fifteen minutes may have been occupied in bringing the head fairly into the pelvis, probably from the placenta partially filling the passage; but, on the whole, the labour was completed without difficulty. The child, when born, appeared to me to be about the seven and a half month. It was asphyxiated, but the heart was beating, though very faintly. Persevering attempts at resuscitation were after (probably) half an hour rewarded by a faint cry, and in a short time I was able to hand over a living child to the nurse. The placenta was found in the vagina, and was removed. My patient made an excellent recovery, but baby gave much trouble from gripes, from excessive secretion of bile (it was necessarily put on the bottle, the mother being unable to nurse), but improved steadily, and left this place, aged about six weeks, in wonderfully good case.

Turning versus *Forceps.*—A woman aged 42 years. Short figure, with a shallow pelvis, justo-minor, and projecting sacrum, which has been latterly increasing; 5-para.

Previous History.—First child a female; labour protracted; not attended by me. Second, a male; labour severe, but not protracted; still-born. Third, a female; labour pains strong, not much protracted; born by natural effort; had an indentation about the middle of the anterior edge of the parietal bone, left side; child born alive; indentation now quite gone. Fourth, a male; pains good, but no progress; applied forceps, but could not deliver; got help from a friend; we both thought we should fail, and were considering the necessity of reducing the size of the head, when at last slight progress was observed, and the difficulty having been got over, the child was extracted, but dead; recovery very tedious. Fifth, warned in July last that she was again expecting her confinement about the end of August. After considering the case, I determined to turn if circumstances appeared favourable. Was sent for on the 8th September. Found the pains pretty strong and regular. Vagina and os both fully dilated, with a fine bag of liquor amnii. Put her under chloroform at once, passed my hand very easily into the uterus, brought down one leg and then the other. The head, however, was long in entering the pelvis, and did not until firm, steady traction had been exerted for some time,—at length, however, the difficulty was overcome with a slight jerk,—and delivery was at once accomplished. The child was, unfortunately, still-born, and could not be revived. The mother has made a most comfortable recovery, and is delighted of this as compared with her last accouchement. For myself, I felt less anxious, and certainly managed it more easily.

ARTICLE VI.—*Case of Extirpation of the Uterus through the Vagina for Carcinoma.* By A. R. SIMPSON, M.D., F.R.S.E., Professor of Midwifery and the Diseases of Women and Children in the University of Edinburgh; President of the Obstetrical, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

CASES of cancer of the uterus suitable for the total extirpation of the organ are rare. Since I heard Professor Freund describe his operation at the Naturforscherversammlung at Cassel, I have been watching for a case in which the operation was not only feasible, but justifiable as offering a fair prospect of extirpating all the diseased tissue. Patients affected with uterine cancer do not often seek advice till the malignant infiltration has extended so far that complete removal is impossible.

The case which forms the subject of this paper was a peculiarly suitable one; the operation was performed with ease, and the patient stood it well. It had an unfortunate termination, through the actual cautery not having proved a sufficient safe-guard against hæmorrhage.

Report of Case, by Mr D. Smart, clinical clerk:—

"A. B., age 39, married; residence, Linlithgow; date of admission, 23rd May 1882.

Complaint and Duration of Illness.—Excessive flow at menstrual period; has lasted seven months.

During the month of October last year, patient suffered much from a feeling of chilliness and shiverings. When her menstrual period arrived in November, the discharge became profuse but not painful. It lasted longer than the usual time, and she consulted Dr Hunter about it, who recognised the serious condition of matters, and by careful operation kept the disease in check for some time. She felt no pain and no feeling of weakness, but discharge at each successive period still continued profuse, and she states that since the commencement of her illness only a fortnight has elapsed, as a rule, between the cessation of the one monthly flow and the commencement of the next, and that for the last two months it has been painful. About six weeks ago discharge at period was much clotted, and since then she states she has felt much better, and her menstrual flow has decreased, she having had one period since the passage of the clotted discharge. Previous health was good; does not know of ever having had any disease or injury. Has had a good, comfortable home; plenty of good food; has never been intemperate. Her father and mother are both alive and well; are aged 65 and 64 respectively; she has three sisters and five brothers, all alive and strong; she states that one brother has suffered from Bright's disease.

Menstruation. — (A.) *Normal.* — (*a.*) Date of commencement: fifteenth year. (*b.*) Type: twenty-eight days. (*c.*) Duration: four days. (*d.*) Quantity: fair. (B.) *Morbid*—(*a.*) Amenorrhœa: never except during lactation and pregnancy. (*b.*) Menorrhagia: has suffered from excessive discharge for seven months, lasting for a fortnight on each occasion. (*c.*) Dysmenorrhœa: has had occasionally a slight burning pain.

Intermenstrual Discharge.—None.

Pregnancies.—(*a.*) Number: six, and four abortions. (*b.*) Dates of first and last: March 1864, February 1880. *Note.*—Last birth was premature, six weeks before term. (*c.*) Abortions: four; in none of them was pregnancy far advanced. She states she considered her clotted discharge of six weeks ago (already described) as not unlike an abortion. She has had three children since her last miscarriage. (*d.*) Character of labours: five presented normally; one was a breech case; has never been the subject of instrumental delivery. (*e.*) Puerperia: all her recoveries have been rapid; has always kept in bed for a fortnight; on two cases she suffered from suppurating breasts. (*f.*) Lactation: although her breasts are small, she has nursed all her children herself till they were ten months old; has suffered from suppurating breasts; excepting during the periods of suppuration, she has always nursed with both breasts.

General Functional Derangements.—(*a.*) Nervous system: normal. (*b.*) Respiratory system: complains of hard, dry, tickling cough. (*c.*) Circulatory system: normal. (*d.*) Digestive system: normal. (*e.*) Emunctories: normal; urine examined, no albumen.

Physical Examination.—Mammæ multiparous; abdomen covered with striæ of former pregnancies. No other fact worth noting.

External Pudenda, Vaginal and Bimanual Examination.—Perinæum ruptured down through external sphincter; ostium vaginæ very patulous; cervix low down, thickened very much antero-posteriorly; margins of os irregular, somewhat excavated, specially posterior lip and towards left side. Mucous membrane of anterior fornix normal, of posterior fornix encroached on by an irregular thickening, especially towards the right side. In posterior fornix fundus uteri felt. *Bimanually*, in left fornix a body is felt in the position of the ovary, but with apparently some deposit round it; uterus freely movable, somewhat enlarged. After careful examination and consultation with Dr Hunter (of Linlithgow), whose patient she was, Professor Simpson decided that the only chance lay in the uterus being removed by operation, which was accordingly done on 23rd May.

Description of Operation.—Patient having been chloroformed, the bladder was emptied with a catheter and a sound passed and held by an assistant. She was then placed in the lithotomy posture, and the cervix drawn down with two volsellæ on anterior and posterior lips. The mucous membrane of the anterior fornix was now divided with the thermo-cautery, and the incision was further carried through the cellular tissue, the exact relation of the bladder being ascertained from time to time with the finger. The cervix having been drawn forwards, the mucous membrane of posterior fornix was similarly incised and the peritoneal cavity opened into. Two fingers were passed through this opening into cavity of peritoneum, when it was found that uterus was quite accessible and freely movable. Hooking the finger over the broad ligament, and depressing with it the peritoneum of the utero-vesical pouch, Professor Simpson divided, by means of cautery, this part of the peritoneum. *There was no hæmorrhage during use of the cautery.* A ligature was now carried round the broad ligament with the finger, the ligature being fixed by a loop to the finger-tip, and the broad ligament thus ligatured on the left side near the body of the uterus. A similar plan having been carried out with the ligament on the right side, the uterus was divided in the middle line with a pair of strong scissors. With the exception of some blood in the uterus itself, *there was no hæmorrhage in making this section*, which was easily and quickly effected. The left broad ligament was now transfixed with a short curved needle threaded with a double carbolized silk suture, by which means the ligament was ligatured in two portions. The left half of the uterus was now cut away, when there occurred some oozing from a vessel in the pedicle, which was controlled by a ligature on the end of the stump. The right broad ligament having been similarly treated, the corresponding half of the uterus was removed, but no hæmorrhage occurred here. The two pedicles were brought down through the opening in the vaginal roof, a T-shaped glass drainage-tube placed between them, a pad of salicylic wool placed over the vulva and kept in position by a T bandage, which also steadied the drainage-tube. There was no loss of blood immediately after operation.

Progress and Result.—After operation patient had good pulse; only ℥j. of blood-stained serum passed through drainage-tube during first ten hours. At 11.30 P.M., however, pretty free hæmorrhage occurred, and Dr Barbour was sent for, who found that the patient was losing a considerable amount of blood. With the assistance of Drs Hewetson and Johnson, he exposed the roof of the vagina, and found hæmorrhage was not coming from either of the pedicles, but seemed to be from corner of fornix or some point higher up in the abdominal cavity. It was temporarily stopped by a pair of artery forceps. Professor Simpson was sent for, and succeeded in checking the bleeding by bringing together the mucous membrane and the peritoneal edges of the wound in the posterior fornix. Patient had then a weak, irregular pulse, but was apparently improving, there being no more signs of hæmorrhage. At 8.30 A.M., however, she collapsed without any premonitory symptoms, and died.

On opening the wound afterwards some blood-clots were found in the vaginal roof, but there had been apparently no internal hæmorrhage."

Professor Freund (of Strasburg) was the first to make total extirpation of the uterus for malignant disease one of the recognised operations in gynæcology. In his method of operating, the uterus is removed by incision through the abdominal walls in the following manner:[1]—An incision is made in the middle line, extending downwards to the symphysis, and, if necessary, the recti are partially divided at their insertion. The peritoneal cavity having been opened into, the intestines are drawn out of the pelvis. Each broad ligament is ligatured in three portions. The lowest loop passes through the round ligament and dips into the lateral fornix of the vagina, so as to control the uterine artery; the intermediate one passes through the round and the ovarian ligament, and thus constricts the pampiniform plexus; the uppermost passes through the ovarian ligament and the upper edge of the broad ligament, thus controlling the ovarian artery. The results of extirpation by this method are so discouraging that it will probably be only employed in cases where, from the smallness of the vagina or the size of the uterus, extirpation by the vaginal operation is impossible.[1]

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[1] Volkmann's *Sammlung klinischer Vorträge*, Nr. 133; and *Centralblatt für Gynäkologie*, N. 12, 1878.

In this case I followed the vaginal method of extirpation elaborated by Czerny[2] and Schroeder.[3] It causes much less shock to the patient than the abdominal method; when the vagina is roomy and the uterus low down, the latter is more accessible *per vaginam*. A great difficulty in this operation is the application of the ligatures. The method—adopted in this case—of passing first a temporary mass-ligature and then dividing the uterus in the middle line, will prove an important modification, as it enables the operator to carry the final ligatures through the broad-ligament pedicles with greater ease and security. Professor Müller of Bern has suggested the propriety of thus splitting the uterus, without however, explaining how it might be done. The method proposed by Corradi, of doing laparatomy first, merely for the sake of ligaturing the broad ligaments, and then extirpating the uterus per vaginam, seems a clumsy procedure.

The operation for extirpation of the uterus through the vagina does not produce a great shock. The condition of this patient after the operation was not worse than after a simple ovariotomy, and much less blood was lost. Of 8 cases operated on by Schroeder and his assistant, and reported in his paper referred to, 7 made a good recovery. Hegar and Kaltenbach[4] have collected statistics of 29 operations, of which 21 recovered, giving a mortality of 26·6 per cent. The sphere of the operation will be always limited, as we rarely see carcinoma of the cervix at so early a stage that we can hope, even by this extreme measure, to remove all the disease. Cancer of the body of the uterus, to which extirpation is more applicable, is rare.

It is important to note that the thermo-cautery cannot always be depended on as a means of preventing hæmorrhage. It did admirably at the operation, the patient losing scarcely an ounce of blood. Ten hours afterwards hæmorrhage began, apparently from the venous plexuses in the fornices; perhaps the pulling about of these edges favoured the detachment of the blood-clot afterwards. On the next occasion I shall use the knife and ligatures.

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[1] According to Hegar and Kaltenbach (*Die Operative Gynäkologie*, Stuttgart, 1881, p. 408), the mortality is 71 per cent. Of 89 cases of completed operation, 26 recovered.

[2] *Wiener med. Wochenschrift*, 1879, Nr. 45–49.

[3] *Verhandlung der gyn., Sektion deutscher Naturforscher in Danzig*, 1880; and *Zeitschrift für Geb. u. Gyn.*, B. vi. Heft 2, p. 213.

[4] *Op. cit.*, *p.* 409.

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Part Second.

REVIEWS.

Manual of Gynecology. By DAVID BERRY HART, M.D., F.R.C.P., etc., etc., and A. H. BARBOUR, M.A., B.Sc., M.B., etc. Edinburgh: Maclachlan & Stewart; London: Simpkin, Marshall, & Co.: 1882.

IN their preface the authors of this volume speak as follows:—"In writing this manual we have tried to keep before our eyes the great principle that the anatomy, physiology, and pathology of the pelvic organs form the foundation of good clinical work. As students we felt the want of a text-book based on this principle, and embodying the most recent views from the various literatures, instead of giving those of one school. This want we have endeavoured to supply."

In proceeding with their book, Messrs Hart and Barbour divide their work into two great parts—Part I., embracing the anatomy, physiology, and methods of examinations of the female pelvic organs; and Part II., diseases of the female pelvic organs. Part I. is again subdivided into two subsections and fourteen chapters, whilst Part II. includes ten sections and forty chapters. Finally, an appendix on syphilis, chlorosis, etc., concludes the work.

From this outline it will be observed that the authors aim at completeness and thoroughness, and we think they have in a great measure succeeded in their efforts. The book is undoubtedly a good one, more especially the first part. Indeed, it contains a better statement of the anatomy and physiology of the female pelvic organs than we have seen in any other handbook extant. The well-known reputation Dr Hart has already gained for accuracy in regard to pelvic anatomy prepared us to expect that this portion of the work would be a masterpiece. In the second part of the book, the want of large experience on the part of the authors considerably detracts from its merits; but even in this respect the work gives evidence of fearless honesty of purpose to say what the authors believe to be true, even when by so doing they are compelled to depart from the traditions of the particular school in which they have gained the most of their clinical instruction. Their book is evidence of a wide acquaintance with the literatures of the subject in Germany, France, Great Britain, and America. But while all will honourably acquit the authors of any intention to give the views of their own school in preference to those of other places and countries, we are not sure that a dispassionate consideration of the work does not fairly fix upon them the charge of giving undue prominence, in a work of the kind, to the views and contributions to the literature of the subject of a single teacher, who happens to be neither of the authors.

Neither labour nor expense has been spared in the illustration of the work. Indeed, we conceive that to a considerable degree the legitimate use of illustrations has been exceeded. Too profuse illustration, we believe, adds to the expense of a work without furnishing adequate advantage in the form of improved usefulness. Besides, we do not think that good taste or good morals require drawings of the complete nude female figure when mere outlines could serve the purpose equally well, as, for instance, in Plate I., page 34, to indicate the subdivisions of the abdomen; Plate IV., page 106, to explain the semi-prone position; and Plate V., page 108, to illustrate the drawing down of the uterus. In the latter case the drawing, besides being unnecessary, is exceedingly defective and unsightly. See also page 95 for another specimen of the sort of thing we object to. This painful tendency to illustration further exposes the authors to the charge too frequently laid against writers of works connected with surgery, viz., of occupying too much space in displaying their own or their friends' modifications of instruments. Thus we find Professor A. R. Simpson's sound, which is in all its essential particulars a reproduction of Duncan's uterine probe, dignified with repeated drawings, whilst Duncan's instrument is merely once referred to in the letterpress; an entire page is devoted to the same gentleman's volsella, whilst surely too much space is given to Hart's volsella and Hart's modification of Kuchenmeister's scissors.

Chapter VI., "On the Physics of the Abdomen and Pelvis," is uncommonly well done, and may be said to express well the present position of our knowledge on this obscure question. The chapters on the physical examinations of the female pelvic organs are well put and contain little admitting difference of opinion, with the sole exception that we think the authors recommend too frequently recourse to pulling down the uterus by the volsella for purposes of diagnosis only. For operative objects it must be frequently had recourse to, but it is a measure so fraught with risks, if carelessly executed, as to make it, in our opinion, not a procedure to be recommended to the student as a routine practice.

The authors still retain the useless dull copper wire curette, although in America it is being discarded as too slim to be of any benefit except, perhaps, for removal of decidual remains. We would draw special attention, as an invaluable feature of this work, to the praiseworthy persistency with which the authors insist upon the propriety of antiseptic precautions being taken, by means of carbolic douche, etc., in connexion with even the slightest operations upon the female genitals. We hope their precepts will be widely pondered and their advice followed. If such is the case, much opprobrium will be removed from gynæcological operations, and much pain and many lives will be spared. The authors declare themselves without hesitation, and we think with right, in favour of chloroform during operation. They say, "Every patient on whom an operation is to be performed may have chloroform; if the operation is indicated, so is chloroform. If the patient has a weak heart, then chloroform is imperative for any operation; it must be given till reflex action is abolished, as any reflex inhibition of the heart is specially dangerous here."

In the literature of the Chapter VIII., on ovaritis, we are astonished not to find Slavjansky's name, though he is one of the earliest writers on the several forms of ovaritis which are adopted by the authors as correct. In the same article we meet a peculiar use of the word "just" which disfigures the book in several places: thus, page 182, line 10, "The symptoms and physical signs are *just* as in the acute form;" page 183, line 14, "Its treatment is *just* as in chronic ovaritis;" page 186, line 9, "Prolapsed ovary lying *just* behind the cervix." This use of the word just is good Scotch, but, unfortunately, is hardly English.

The chapter on pelvic hæmatocele is brief, but very much to the point. The authors give a good description of Battey's operation, but wisely refrain from committing themselves regarding an operation still on its trial.

The authors state, we think too dogmatically, at page 201, that parovarian fluid, to the naked eye, is *just* like clear water, and is little more than a solution of salt. Greater experience will teach them that though this is frequently the case, it is not at all universal. and that parovarian cysts may contain fluids of various consistencies, The recent careful experiments of Garrigues also show that they are quite wrong in stating, at page 208, that the fluid from a fibro-cystic tumour spontaneously coagulates. The results of Garrigues prove beyond question that this is not always the case, though it has long been believed to be true. In regard to the operation of ovariotomy, as, indeed, in respect to any operation given in the book, the description is uncommonly good—clear, pointed, and not too prolix. We believe that the authors err in adhering too strongly to the mischievous doctrine of stenosis of the external os uteri. We are glad, however, to perceive that they have all but given up belief in stenosis of the internal os. This is a great advance in itself, and will, we believe, be by-and-by completed by a nearly as complete denial of stenosis of the external os. In regard to the modern doctrines regarding cervical lacerations, the authors give their adhesion to the views of Emmet, wisely hinting that the operation has been, in their opinion, too frequently performed in America, as an explanation of why it makes so slow progress here and on the Continent.

In the chapters on cervical catarrh and on metritis and endometritis the authors have done much to present a series of very difficult and obscure subjects in a rational and intelligible form. Without pledging ourselves to agreement in all the statements made, we do not think any English author has as yet presented chronic endometritis in a form so rational and so complete.

But it is in regard to the doctrine of flexions that most credit is due to the authors in discarding the traditions of the Simpsonian school in which they have been trained, and honestly declaring their own convictions in the light of modern research.

According to them, anteversions have no pathological existence. Anteflexions are to be investigated with most extreme care, and in most cases not to be interfered with. The use of the intrauterine stem is to be very seldom had recourse to. We wish they had gone a step farther and had rejected the Sims operation. If the anteflexion depends on retraction of the cervix through antecedent inflammatory contraction in the retro-uterine ligaments, as it has been shown by Schultze frequently to do, the authors recommend to let the case alone. In regard to their views on retroversions and retroflexions we see really nothing to find fault with. We are prepared to agree with every one of them.

Without considering the rest of the work in detail, we may say at once that all the chapters are written with extreme care, that they each give evidence that the authors possess a rare and minute acquaintance with the literature of the subjects handled, and the power to express their views in terse and clear language. The task proposed by the authors is a large one, and in their endeavours to compress their subject we think they occasionally err in making the papers rather brief and sketchy; but if they had done otherwise, the volume, already large, would have been much larger, unless a smaller amount of space had been taken up with illustrations. We rather think, had the letterpress been extended at the expense of many of the illustrations, the book would have been more useful.

However, taking it all in all, the work does at once credit to the authors and to the school which has produced them. We feel certain it will be hailed by the gynecological student as a great boon, since it presents him, within comparatively short compass, with an amount of valuable knowledge of the subject which hitherto he could only attain by wide reading in at least three languages. We regard the work as certain to be widely useful, and cordially recommend it to the attention of all our readers who are interested in scientific gynecology.

Manual of Diseases of the Skin; with an Analysis of Eight Thousand Consecutive Cases, and a Formulary. By L. DUNCAN BULKLEY, A.M., M.D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, etc. London: J. & A. Churchill: 1882.

IN a neat, well-printed volume of 312 pages, Dr Bulkley has managed to convey, in a very lucid manner, much information on diseases of the skin, but has, we think, in many cases, carried condensation rather too far. The descriptions of disease, while in general distinct enough, provided the reader is moderately well acquainted with the subject, are certainly too meagre for the average student. For want of space, the author says, the differential diagnosis has not been fully entered on; but in connexion with each eruption, mention is made of those with which it may be confounded. It seems almost a pity that, in planning such a work, more space had not, in the first instance, been provided, since, however excellent a training it may be to compare the accounts of affections which simulate one another, unless the symptoms are fully detailed, the points of agreement and of difference may be missed. The work is fuller in the therapeutics than might, from its size, have been expected; yet here too we meet with evidences of haste which mar the excellences it undoubtedly exhibits. Thus the treatment of ringworm is dealt with in an unsatisfactory and fragmentary manner; while surely it is not enough to say of lichen in all its forms, "that the treatment is essentially that of eczema, and need not be fully detailed. Both internal and external medicines are required. Alkaline tonics and baths are especially valuable." We encounter both errors and omissions also. It seems to us an example of the former to class the recently described disease pityriasis maculata and circinata with pityriasis rubra, and not rather under lichen, to which it bears a much closer affinity; and of the latter, that in the full formulary with which the volume closes, boracic acid in any combination is quite left out.

Dr Bulkley does not show himself at his best in this volume. More time should have been given to the compilation, more space for the details of such a work. Should a second edition be required, these faults may easily be corrected.

Essentials of the Principles and Practice of Medicine: a Handbook for Students and Practitioners. By HENRY HARTSHORNE, M.A., M.D. Fifth Edition. London: Smith, Elder, & Co.: 1881. Pp. 669.

WITHIN the limits of these pages Dr Hartshorne has managed to bring together a very large amount of useful information. It is true that the condensed style, which was a necessity if so much ground was to be gone over, at once renders the perusal difficult and the treatment, in many if not most portions of the book, superficial; but at the same time, it must be admitted that the author has left few points untouched, and that he has included, in most cases, the results of the more recent inquiries.

Perhaps the most noteworthy sections of the book are those which deal with semeiology and with general therapeutics; but even in these there is hardly a subsection to the treatment of which considerable exception could not be taken. In discussing laryngoscopy, for example, no mention is made of any of the forms of paralysis of the vocal cords which are perhaps the most important of the strictly medical indications which the laryngoscope affords. The description of electric diagnosis is also very far from being such as would give a student a clear view of its aim and value.

But while we regret that the limits which the author has seen fit to set to his work, and the extent of ground which he has endeavoured to travel over, have combined to prevent any section of the book being treated in the way in which we would like to see, it is clear that the author possesses an unusually extensive and minute acquaintance with the literature of medicine, and it is to be hoped that in a future edition he may allow himself such space as will permit his knowledge to be turned to better account.

Percussion Outlines. By E. G. CUTLER, M.D., and G. M. GARLAND, M.D. Boston: Houghton, Mifflin, & Co.: 1882.

THIS volume is illustrated with nine diagrams, all of which are borrowed from Weil's well-known work on Percussion. They are well executed, and very effective for the purpose of showing the position of organs within the thorax and abdomen, and the lines of percussion dulness corresponding to each. The letterpress which explains these diagrams, and which constitutes the volume, is not by any means remarkable either for lucidity or originality, and one feels that the authors would have better used their time and energies in translating the text in which Weil himself describes these diagrams.

The Retrospect of Medicine. Edited by W. BRAITHWAITE, M.D., and JAMES BRAITHWAITE, M.D. Vol. LXXXV. January–June, 1882. London: Simpkin, Marshall, & Co.: 1882.

THIS volume contains much interesting matter, collecting as it does many of the more important articles which have appeared within the period of six months with which it corresponds. Perhaps the best portion of the book is that which concerns itself with the diseases of the system generally. Among these articles there are to be found two written by the editor of the *British Medical Journal*, one on the Bacillus of Typhoid Fever, the other on Fermentation and Disease, which will be read with much interest, as will also the thoughtful article by Dr George Harley on the Action of Germs.

When, however, we leave this section of the *Retrospect* and pass to those which deal with diseases of the various systems, the inequality of the work becomes painfully manifest. Take, for example, the articles on the organs of circulation. Only two papers appear under this heading, one on the use of nitro-glycerine, and the other, curiously enough, on a mechanical means of arresting nasal hæmorrhage. One is inclined to ask if these are the only two articles of importance on disease of the organs of circulation which have recently appeared. Contrasting this with other portions of the volume, the inequality becomes all the more conspicuous. There are, for example, no less than nine articles on diseases of the bladder and urethra.

The volume, in spite of such defects, is an interesting one, and will well repay perusal.

Consumption: a Reinvestigation of its Causes. By C. W. DE LACY EVANS, M.R.C.S. London: Baillière, Tindall, & Cox: 1881.

IN this volume the author endeavours to prove that consumption arises from an excessive action of atmospheric oxygen. It is full of extraordinary misstatements and still more extraordinary omissions. Mr de Lacy Evans has much to learn, and ought to have learnt it before publishing a work on consumption.

Health Resorts and their Uses: being Education Studies in various Health Resorts. By J. BURNEY YEO, M.D. London: Chapman & Hall: 1882.

THIS attractive volume contains a great amount of well-digested information and advice for the many persons whose infirm health raises the question of a suitable health resort. We have had little time at our disposal for reading the work from beginning to end; but such portions as we have perused impress us with the conviction that Dr Yeo may be safely trusted as an intelligent, well-informed, and ingenuous adviser. His chapters appeared originally as articles in the *Fortnightly Review* and the *Times* newspaper, and are now reprinted at the recommendation of friends who had recognised their value. In this decision we fully concur. We would specially call attention to what he says about Davos Platz, St Moritz, and Pontresina. He has cleared up our ideas in regard to the comparative merits of these places, and has at the same time deepened our conviction that a sudden rise in the reputation of a health resort is very apt to lead to the ruin of its undoubted advantages by the crowding which speedily ensues, and by the inevitable disturbance of the sanitary conditions which it originally possessed. Another lesson seems to be taught of a still wider application, which is this, that invalids, before hurrying abroad, should carefully forecast the home advantages as regards food and other social and moral comforts which they must be prepared to sacrifice.

We warmly recommend the book as a trustworthy vade-mecum.

The Harveian Oration, 1880, *delivered June 25th.* By JOHN W. OGLE, M.A., M.D. Oxon., Fellow of the Royal College of Physicians, Consulting Physician to St George's Hospital. London: 1881.

THIS is a handsome volume, luxuriously printed on thick paper, extending, with an appendix of many notes, to 209 octavo pages. It has a really beautiful frontispiece, a photograph of a picture by W. F. Yeames, R.A., representing Harvey with the two children of Charles I., our future kings, at the battle of Edgehill, 1642.

As we might expect, there is very little fresh to be said about the great physiologist; but Dr Ogle contrives to give a great amount of important and interesting information on many subjects which cluster round the principal figure. Sometimes the connexion is not manifest at first sight, and we cannot help thinking that the arrangement of topics is rather defective, and the attempt to draw them into focus not always very artistically managed. Perhaps this arises from too wide and too ambitious a programme. We read with interest, however, many historical details and many kindly notices of eminent men of successive generations. Dr Ogle is evidently a gentleman of learning and culture, imbued with a high sense of the dignity of his profession and a thorough belief in its future progress. He discusses with ability and great good sense the vexed question of *vivisection*, and shows conclusively, as we think, that William Harvey, John Hunter, Charles Bell, Marshall Hall, and other pre-eminent cultivators of medical science, could not have achieved their triumphs without having had recourse to it.

We have much pleasure in recommending this book, which bears unmistakable evidences of true *limæ labor*, to general attention.

St Thomas's Hospital Reports. New Series. Vol. XI. London: J. & A. Churchill: 1882.

THIS volume, which represents a field of practice so extensive and famous, cannot fail to contain much important and interesting clinical observation. We cannot do more than refer to one or two of the twenty-six papers which compose it. Dr H. G. Armstrong relates a case in which the sciatic nerve was stretched with very remarkable improvement. The case was one of spinal meningitis with ataxic symptoms caused by injury. Severe lancinating pains and tetanic spasms made the patient's life miserable, and simultaneously with these he had complete anæsthesia of both lower extremities up to the groins. In the hope of affording some relief, the sciatic nerve was exposed and forcibly stretched, a proceeding which was not felt by the patient, so complete was the anæsthesia. This was on March 27th, 1881. On the 2nd of April it was reported, "Has had no pain for 24 hours." 7th, "Tactile sensibility has returned over the whole of both lower extremities." 12th, "While lying on his back, can raise his legs easily from the bed and hold them out straight without any waving from side to side, and has no difficulty in placing his foot on any indicated spot." June 24th, "Walked a distance of seven miles before breakfast without fatigue."

The remarkable fact, however, was, as the author points out, *the return of cutaneous sensibility* in both limbs, and that, too, although only one sciatic nerve was stretched; as if the operation acted in some way, not on the periphery, but on the nerve centre.

The only other paper we can refer to is a very satisfactory and tenderly appreciative "In memoriam" of Dr Thomas Bevill Peacock, who died suddenly on May 30th, 1882, in one of the wards where he had done admirable work for many years—occupying finally the honourable position of consulting physician to that noble institution.

A Concise Hand-Book of the Laws relating to Medical Men. By JAMES GREENWOOD, of the Inner Temple, Barrister-at-Law. London: Baillière, Tindall, & Cox: 1882.

THIS book is intended to supply a desideratum by bringing together for the first time the legal enactments regarding the practice of the medical profession in all its aspects, so that the title given above seems somewhat defective. As far as we can judge, it is well adapted for the purpose aimed at. Dr Forbes Winslow writes a commendatory preface, and furnishes a chapter on the law relating to lunacy practice—a subject specially interesting to the profession, and one which he is well fitted to handle. The appendix M. contains a satisfactory exposition of the *lex non scripta* of medical etiquette. It concludes with quoting, as the true key to all such questions, the golden rule, "Whatsoever ye would that men should do to you, do ye even so to them."

There is a full table of the legal cases cited; an enumeration of the chief statutes relating to medical men; and a full index applicable to the whole work. We may add that the book is dedicated to Mr Jonathan Hutchinson, F.R.S., senior surgeon to the London Hospital. We expect that it will meet with the success which it really deserves.

Medical and Surgical Report of the City Hospital of the City of Boston, U.S.A. Printed by the Trustees: 1882.

THIS is one of the very best volumes of hospital reports we have ever read. In most instances such volumes are very unequal—a few good articles with a great deal of padding—statistics without life, essays by very young men, written for writing's sake. This book has less padding and more real experience than usual, and will, all of it, bear careful perusal.

Diseases of the Ear. By GEORGE P. FIELD, M.R.C.S., Aural Surgeon to St Mary's Hospital, and Lecturer on Aural Surgery in the Medical School. Third Edition. Illustrated with Coloured Plates and Woodcuts. London: Henry Renshaw, 356 Strand: 1882. Pp. 335. 8vo.

THE first edition of this work appeared in June 1876, the second, enlarged, in April 1879. Those having been sold out, we have the third edition, the present handsome volume, in July 1882. The above facts are good evidence in favour of the value of the book. The rapid sales of the first and second editions of the book also illustrate the progress made generally in aural surgery, and the demand for works on diseases of the ear. We have in this third edition brought before us to a much greater extent the results of the author's own extensive experience and that of other aural surgeons, foreign and British, all of whom, Mr Field not the least, have considerably advanced our knowledge of diseases of the ear, and greatly facilitated their relief and cure. The number of coloured plates and woodcuts has been considerably increased, and the morbid conditions of the drumhead are thereby beautifully illustrated, more especially if we do as we are told, and look at these special illustrations of Mr Field's through an aural speculum. Besides the thorough revision of the whole work, we have five new chapters added, giving us a full account of osseous tumours of the meatus, with the surgical interference as practised by the author fully described. The structure of aural polypi is well described, and illustrated with coloured plates and woodcuts. A short but clear reference to branchial fistulæ, p. 92, and an exhaustive chapter on the subject of deaf-mutism, with statistics; a chapter on "Aids to Hearing," hinting at the help still being looked for from electricity in some one or other of its recent developments; an index, on which much care has evidently been bestowed, thus greatly facilitating immediate reference, render the work most suitable as a text-book for the student, for the practitioner, or aural surgeon. As a text-book for students of medicine we have already experienced much satisfaction from its recommendation.

On Cancer of the Breast. With Coloured Illustrations. By THOMAS WILLIAM NUNN, F.R.C.S. Eng., Consulting Surgeon to the Middlesex Hospital. London: J. & A. Churchill: 1882.

THE author of this magnificent contribution to the study of cancer has a right to give an opinion on the subject, having had for many years the exceptionally favourable opportunities for the study of cancer afforded by the wards of the Middlesex Hospital, to which he is now consulting surgeon.

The book is divided into two distinct halves—first, Clinical and Practical. The appearance, prognosis, progress, question of operation, method, results, are all detailed in successive chapters and sections, illustrated by typical cases and by luxurious, highly-coloured plates. The second portion he calls Pathological and Speculative, including theories as to origin, and facts as to microscopic appearances, statistical averages, and analyses of groups of cases.

There is a great amount of material in this volume, which, if put properly together with an individuality, might have made a good book. As it is, it is most disappointing, as we rise from its perusal unable to say what the author's views are as to pathology, or what his success has been as to recovery from the operation.

The teaching as to the method of operating and the principles of wound dressing are so confused, so archaic, and exhibit such an ignorance of the later views as to the process of healing, as to be quite useless to the student or practitioner. Many authorities are quoted, but the reader is left to choose for himself, without much aid from Mr Nunn. It is sad to have to criticise such a beautiful book.

On Hæmorrhoidal Disorder. By JOHN GAY, F.R.C.S. London: J. & A. Churchill: 1882.

MR GAY's main object in this little book is to combat the old-fashioned idea that piles had anything to do with hepatic derangement. Mr Gay attempted to inject the hæmorrhoidal veins from the portal system, but failed.

He divides the hæmorrhoidal condition into three varieties—1. Anal varicosity; 2. Varicose hæmorrhoidal veins; 3. "Hæmorrhoidal varix—saccular or erectile—the true pile." Mr Gay's style of writing is not very lucid; but when he speaks of treatment it is very difficult indeed to make out what he recommends. He quotes from Hippocrates, and speaks of burning and singeing, boiled oil, etc., in a manner that would lead one to suppose he knew nothing of modern methods of treatment. In one thing we thoroughly agree with Mr Gay—viz., that piles are generally caused by inattention to the bowels, allowing them to be habitually constipated.

There is nothing specially new brought forward by Mr Gay, unless the fact that in his experience the portal system has no connexion with the hæmorrhoidal veins.

Clinical Lectures on Diseases of the Urinary Organs. By Sir HENRY THOMPSON. Students' Edition. London: J. & A. Churchill: 1882.

THIS cheap edition of a well-known and valuable work is most welcome, not only to students, but also to all medical practitioners. The price places it within the reach of all, and we have no doubt multitudes will avail themselves of the advantage. The type, though small, is clear, and the illustrations both numerous and good.

We would like to see more of the standard works produced in the same convenient form.

The Surgery of Deformities. By E. NOBLE SMITH, F.R.C.S. Ed. London: Smith, Elder, & Co.

A Treatise on Orthopædic Surgery. By J. W. HAWARD, F.R.C.S. London: Longmans, Green, & Co.

EACH of these books professes to be a complete manual or text-book for students or practitioners on the subject of the surgical treatment of deformities.

The former is by far the better of the two. Mr Haward dismisses several subjects with but scanty treatment, and there is little in his book which a student would not find in the ordinary surgical text-books.

Mr Smith deals more fully with his subject, and quotes largely from the best authorities.

We cannot agree with all Mr Smith says. We do not think that his explanation of the rotation of the vertebræ in lateral curvature of the spine is the best. We prefer to agree with Mr Adams. Neither do we think Mr Smith gives the proper pathology of genu valgum when he attributes the deformity, in the majority of cases, to enlargement of the internal portion of the head of the tibia.

In his appreciation of the use and influence of antiseptic surgery Mr Smith shows himself far behind the age. He speaks of operations for the relief of deformities as being highly dangerous to life, which we know are almost daily performed with perfect safety under the protection of proper antiseptic precautions. We can explain Mr Smith's attitude on this subject only on the supposition that he either does not understand antiseptic surgery, or is so wedded to mechanical treatment that he can see only harm and danger in all operative procedures.

A Study of the Tumours of the Bladder. By ALEX. W. STEIN, M.D. New York: William Wood & Co.: 1881.

A VERY interesting and exhaustive treatise on the subject. Some of Dr Stein's conclusions are as follows:—In cases of tumour of the bladder the disease is certain to be fatal, and that in a few months if the symptoms are acute. Death frequently results from hæmorrhage. Diagnosis and removal are both comparatively easy in the female. In the male, diagnosis is not so easy, there being only three symptoms to guide the surgeon—pain, irritation of the bladder, and hæmaturia. Removal should always be attempted, and as early as possible; for, on the one hand, examination after death has shown that many of the tumours could have been removed, and, on the other hand, even should the tumour not be removable, the free drain established by the operation always relieves the patient's sufferings.

The operation is free incision as in lateral lithotomy, and the removal of the tumour by forceps or liagature. Spontaneous expulsion of a portion of the tumour, or the tearing away of a piece entangled in the eye of a catheter, sometimes occurs, and is, of course, a great aid to diagnosis. We recommend this little book to all practical surgeons.

Journal of Anatomy and Physiology, Normal and Pathological.

THE *Journal of Anatomy and Physiology* for July contains a paper on "Fat Embolism, by R. Saundby, M.D. Edin., and Gilbert Barling, M.B. Lond., F.R.C.S. Eng.," giving a *résumé* of the literature of the subject, as well as an additional case which occurred in the Birmingham General Hospital. The patient was suffering from compound fracture of the left leg, and died three days after admission with unmistakable symptoms of fat embolism. Post-mortem, the lungs were found to be crowded with fat embola, most being found in the arterioles, few in the capillaries.

Since the occurrence of this case the authors have examined the lungs of a large number of cases dying from disease or accident. Out of ten cases of injury, fat embolism was found to a greater or less extent in eight, the exceptions being tracheotomy and herniotomy. In all the eight cases the bones were injured either by fracture or amputation, and in none were there any symptoms during life pointing to fat embolism. In the cases of disease examined no fat embolism was ever found, except in one case of diabetes with milky blood. The authors, therefore, incline to the opinion that fat embolism is generally present after fractures, but that it is innocuous except when present in very large amount.

In the case of diabetes with milky blood no true embola were found, but fat globules were seen in the coagula found in the vessels after death. These globules they consider to be of post-mortem formation, due to the running together of the fine oil granules existing in the blood. They regard the case described by the late Professor Sanders and Professor D. J. Hamilton in the *Edinburgh Medical Journal* for July 1879 as having been similar to the above, and not a case of true fatty embolism such as is found after fractures.

Dr Ogston of Aberdeen has the commencement of a valuable paper on "Micrococcus Poisoning." He holds that septicæmia is to be regarded "not as a poisoning of the blood *per se*, but as a disease existing in the tissues, from which the blood is but secondarily affected to a greater or less extent." He maintains that the tissues are the great source of septicæmia and pyæmia, and that the "general disturbances are merely due to the fluids or ptomaïnes that the blood carries away with it as the result of its passage through the diseased foci."

There is also an interesting paper on "A Variety of Pulmonary Lobation, and its Relation to the Thoracic Parietes as illustrated by Comparative Anatomy and Abnormalities in the Human Subject," by Wm. Allan, M.D., Glasgow.

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Archives of Laryngology. Vol. III., [illegible] York: G. P. Putnam's Sons.

Dr Morell Mackenzie, London, writes the first article upon the "Removal of Nasal Polypi," in which he compares the various methods. He only uses the ordinary forceps for evulsion when the cure must be rapid. Generally removing the growth with his punch-forceps, and then applying the electric cautery to the base of the growth.

Dr W. C. Jarvis, New York, has two papers in this number; the first, on "Removal of Hypertrophied Turbinated Tissue by Ecrasement with the Cold Wire." When he considers the operation is likely to give rise to bleeding, he advises the very slow working of the ecraseur handle, allowing the patient to do it himself. In this way the pain, he states, is very much lessened. His second paper is upon "Chronic Irritating Hyperæmia of the Larynx."

Dr Porter, St Louis, considers, from his observations, that destruction of the nares by growths there situated is a cause of asthma, and thinks the symptoms are most probably due to reflected impression through the fifth nerve, and finds relief to these is obtained by the removal of the cause, *i.e.*, the growths.

Dr Rumbold, St Louis, writes also on the same subject.

Dr Felix Semon, London, details in full his case of "Œsophageal Carcinoma in a Goitrous Patient." This remarkable case is referred to already in the Transactions of the late International Congress.

Dr Emil Gruening, New York, states in a short article that tonsillar and pharyngeal concretions are always composed of leptothrix buccalis, and are thus parasitic, and not due to a perverted condition of the natural secretions of the part.

Dr Lefferts, New York, advances a new classification of the motor affections of the larynx, in which he does away with the old arrangement of the laryngeal neurosis, founded upon a basis of purely anatomical and physiological nature.

Dr Ward, New York, writes on "Paresis of the Vocal Cords."

Dr Rae, New York, in a paper on "The Comparative Value of Atomized Fluids in the Treatment of Diseases of the Larynx," deprecates the use of the spray, preferring the use of brush or sponge which, of course, the surgeon himself applies.

Dr Daly, Pittsburgh, points out the connexion between chronic naso-pharyngeal catarrh and hay asthma, and gives cases in which the symptoms of the latter have quite gone after proper treatment to the former.

Die Funktion der Bogengänge des Ohrlabyrinths. Von Dr BENNO BAGINSKI, Berlin. Pamphlet, pp. 9.

The Function of the Semicircular Canals. By Dr BENNO BAGINSKI.

THE obscurity associated with Menière's disease, from a pathological point of view, renders any facts relating to the functions of the semicircular canals of the greatest interest. Among the numerous theories proposed to explain the mode of production of the peculiar movements which follow mutilation of these organs, there is probably none which has been demonstrated with any degree of certainty. The theory which has been most generally accepted is that disturbances in the pressure of the endolymph are accountable, and an experiment of Munk, of increasing the tympanitic pressure, and consequently the labyrinthine pressure, by injecting fluid into the tympanum, is often quoted in its support. Dr Baginski has, however, found that these effects are only produced when the pressure is increased sufficiently to rupture the membrane of the round window, by which means the fluid is permitted to penetrate to the brain through the communication of the aqueductus cochleæ with the scala tympani, and the latter with the submeningeal space. In all cases where the movements followed it was found that inflammation or hæmorrhage was produced in the neighbouring parts of the brain, and that the rapidity with which the symptoms appeared, and their severity, was proportionate to the irritating qualities of, and pressure exerted by, the injected fluid.

It will be recollected that irritation of the portion of the corpus restiforme which lies immediately under the jugular fossa has been found by Magendie, Schiff, and others to cause analogous results, and Dr Baginski points out that in both cases we probably have a similar mechanism, with the addition, in the case of the injections, of a labyrinthine irritation. To eliminate the value of the latter, Dr Baginski employed the method of Heidenhain of removing a portion of the bulla ossea by which the canals are directly reached, and he found that dogs in whom portions of the bony labyrinth are removed became perfectly deaf, but showed no disturbances of equilibrium when the brain remained uninjured, even though the entire labyrinth underwent fatty degeneration. When, on the other hand, an entire semicircular canal was removed, then the disturbance appeared, but could be directly traced to an inflammatory condition of the brain.

The author shows that a similar mechanism explains the losses of equilibrium in birds after injury of the canals, and denies there being any relationship between the location or direction of the canal injured and the character of the resultant motion. He concludes that, whatever may be the function of the labyrinth, it is not for the purpose of serving "an equilibrium sense," and it is probable that the gross lesions of the semicircular canals, in the rare cases of Menière's disease which have been carefully studied, have been associated with less evident lesions of the adjoining parts of the brain.

In Memoriam. Erasmus D. Forée, 1817–82.

Dr D. W. Yandell of Louisville, Kentucky, who was the author of an admirable discourse *On the Life and Character of Dr Richard Oswald Cowling*, which appeared in our August number, now sends us the above "In Memoriam," which he delivered under very striking circumstances at a meeting of the Physicians of Louisville, 28th February 1882. The opening sentences will show what we mean. "Mr Chairman,—Last Saturday morning, meeting Dr Forée, he asked me if I had finished the address on *Dr Cowling*, which I am to deliver now in a few hours. On being answered that I had, he appointed Sunday evening as the time when he would come to my house to hear it read. He loved Dr Cowling, and wished to hear what I said of him. Sunday morning, I awoke to the news of the sudden death the evening before of Dr Forée."

Our space prevents us from giving the "In Memoriam" of Dr Forée in full; but we may say that Dr Yandell, who evidently possesses the gift of drawing appreciative portraits of his professional friends, makes it very clear that a remarkable member of our profession has been lost to the community of the large city on the banks of the Ohio. "Dr Forée was pre-eminently the counsellor of the profession. . . . But it was in his intercourse with the sick that Dr Forée exhibited his best and highest qualities. He was prompt. He was punctual. He was patient. He was experienced. He was skilled. He was learned. He was wise. . . . He literally carried his patients in his head and nourished them in his heart. He gave them not only his first and his best, but he gave them his every thought. He never forgot them, nor wearied of listening to their complaints, nor relaxed in his efforts to assuage their pains or drive away their diseases. He fulfilled all the requirements of the law. He cured where cure was possible—quickly, safely, pleasantly; and where death was inevitable, he gave a sympathy which was so genuine, so tender, and so sweet that it fell as a balm on the hearts of the stricken survivors."

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Part Fourth.

PERISCOPE.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

The Diagnosis and Treatment of Chronic Inflammation of the Ovary is the subject of an extremely ingenious communication by Mr Lawson Tait in the same journal. After a brief review of gynæcological progress, the author promises a work in the near future in which he is to prove that the ordinary physiological views regarding the relation of ovulation to menstruation are entirely wrong, and that the ovaries have nothing to do with menstruation, which depends upon the Fallopian tubes. Tait points out that, as in other organs, chronic inflammation of the ovaries usually commences with an acute attack. The acute disease may be initiated in various ways, such as by a simple chill, a hæmatocele, a gonorrhœa, an exanthematic fever, or in miscarriage or childbed. The last two sources he considers as by far the most common, and to present two specific forms of interstitial oöphoritis and perioöphoritis. Whilst many acute cases get quite well, others end in permanent mischief. The patient experiences menstrual distress, is apt to be subjected to various ill-advised treatments through failure on the part of the doctor consulted to detect any distinct pelvic or uterine disease. Such a woman, if she marries, remains sterile. If she is in comfortable circumstances, change of scene, rest, and luxury make her life endurable; but if she is the wife of an artisan, her lot is one of long unhappiness till the climacteric period has passed, and during that period of trial many of these women become drunkards. The author then proceeds to enumerate other symptoms associated with oöphoritis. He points out that the pain is much more frequent on the left side than on the right, as, if only one ovary is affected, it is always the left. He also points out that in exanthematic oöphoritis the diagnosis is more difficult than in those arising after miscarriage or childbed. In the former we have no objective symptom to guide us, as the changes in the ovaries are not associated with enlargement or tenderness, and we can only be guided to an opinion by the patient's history of her case. In the latter the ovary is enlarged and tender, and can usually be felt so. From finding chronic oöphoritis to be so extremely intractable and unbearable, the author strongly urges the advisability of removal of the offending organs, endeavouring to establish his view by reference to the nearly certain cure which follows operation, and the slight risk which accompanies it in the hands of a skilful operator. He maintains that the operation has been regarded as more fatal than it really is through the mistakes necessarily arising in the hands of operators who had had very slight experience of it. Of the forty operators in the list of 171 cases given in Agnew's Surgery, only three had operated fifteen or more times. This fact is of itself, as the author thinks, sufficient to explain the high mortality following it, viz., nearly 19 per cent. The author, in a recent series of sixty-one cases, has only lost three, or 5 per cent. In thirty-five cases of chronic oöphoritis he only lost one, or 2·85 per cent. In his entire experience, including seventy-five cases, his mortality has been six, or 8 per cent. The records of two illustrative cases conclude the paper.

In the same number of this valuable journal Dr Garrigues completes at page 680 a most important inquiry on THE DIAGNOSIS OF OVARIAN CYSTS BY MEANS OF THE EXAMINATION OF THE CONTENTS. This paper, which is based upon observation of the fluids in ninety-four cases, viz., *fifty-seven operated* and *thirty-seven tapped* cases, ends in a series of fifty-five conclusions, all of which deserve the most careful study. Our readers will, we feel sure, be much interested in these deductions. We have extracted all except a few that seemed not specially important.

1. By studying the physiological, chemical, and microscopical characters of the fluid, it is almost always possible to diagnosticate ovarian cysts.
2. The *physical characters* give myxoid ovarian fluid, in most cases, a certain appearance by which it is recognised at once.
3. The *viscidity* is the most important physical character when present, but may be absent in ovarian and present in non-ovarian fluid.
4. The higher specific gravity may be of some use in distinguishing ovarian fluid from that of a cyst of the broad ligament. In the differential diagnosis between ovarian cysts and ascites it has only some value in extreme cases.

5. The colour, limpidity, odour, and reaction are not characteristic.

6. No *chemical* product peculiar to ovarian fluid has been found.

7. *Coagulation.*—As a rule, ovarian fluid does not coagulate spontaneously, and when it does, the coagulation takes place slowly. Ascitic fluid, as a rule, coagulates spontaneously and slowly, forming a small coagulum. The fluid of uterine fibro-cysts does sometimes coagulate, and then in a mass and immediately.

8. Ovarian fluid coagulates, as a rule, to a great extent or entirely by heat. In two cases out of three of cysts of the broad ligament this coagulation did not take place. The third was not tested in this respect.

9. *Scherer's Test for Paralbumen.*—In most cases the coagulum formed by boiling alone, or with a drop of acetic acid to counterbalance alkalinity, was more or less completely redissolved by boiling with the same reagent in excess. But the test is not reliable. Some ovarian fluids were little or not at all changed, and in some tapped cases, which decidedly were not cystic, but ascitic, complete redissolution of the coagulum took place.

10. In ovarian fluid the histological elements are, as a rule, preserved for a more or less long time (weeks or months). Not so with fluids from ascites or from cysts of the broad ligament. When present this character has diagnostic value, its absence none.

11. The microscopical examination is of much greater importance than the physical and chemical (inclusive of spectroscopy).

12. It is only by studying the cyst walls, and especially by tracing the formation of cysts back to its very beginning, that we can come to understand the fluid they contain.

13. Fluids ought to be examined as fresh as possible; for although ovarian fluid often may be recognised after months, sometimes it is not the case, and other fluids are often changed very soon—larger bodies being broken down to granules or altogether dissolved, and movements arrested.

14. The bodies seen in ovarian fluid are red blood-corpuscles, epithelial cells, nuclei, granules, pigment, finely granular globular bodies like lymph-corpuscles or colourless blood-corpuscles, pus corpuscles, spindle-shaped cells, colloid masses, cholesterine, and indican.

15. The epithelial cells are columnar.

16. In one case were found corpuscles with amœboid movements.

17. Bennett's large corpuscles are epithelial cells in fatty degeneration. Another kind, which I call the dark variety of Bennett's corpuscles, are epithelial cells filled with pigment.

18. Bennett's small corpuscle, Drysdale's granular ovarian cell, is no cell, but the nucleus of an epithelial cell in a state of fatty degeneration.

19. The small bodies with dark granules so common in ovarian fluid are likewise nuclei of epithelial cells.

20. There is no pathognomonic morphological element in ovarian fluid.

21. The most important elements in regard to diagnosis are columnar epithelial cells, seen in side view. Their presence excludes all other tumours than those of the ovary, Fallopian tube, and broad ligament (perhaps with the exception of a cyst of the pancreas).

22. Bennett's corpuscles, Drysdale's corpuscles, nuclei with dark granules with cholesterine, have no diagnostic value.

23. Cysts of the broad ligament cannot be distinguished from those of the ovary.

24. John Hughes Bennett of London [*sic!* We had hitherto associated Edinburgh with this name.—A. M.] was the first who described and delineated both the large and the small granular bodies commonly found in ovarian cysts, and noticed that the latter have no nucleus—not even after addition of acetic acid.

25. Eichwald was the first to mention the presence of colloid globules, horncells, cholesterine, and pigment.

26. Waldeyer was the first who pointed out the presence and diagnostic value of the columnar cells.

27. If a fluid contains hair or epidermal scales, or is composed of melted fat, it is *dermoid*, but nothing shows that it is ovarian. Sometimes dermoid-ovarian cysts contain a fluid like that of myxoid cysts. Sometimes both these classes of characters are combined, and then the diagnosis of dermoid ovarian cyst can be made.

28. A fluid as clear as water, and containing very few histological elements, and without nuclei with shining granules (Drysdale's ovarian cells), may be found in ovarian cysts, both true monocysts (hydrops folliculi), and multilocular cysts with ciliated epithelium.

29. Neither the quantity, nor the size, nor the shape, nor the arrangement of the elements found in cystic fluid enables us to tell that the cyst is sarcomatous or carcinomatous, but only that it is ovarian.

31. Both ovarian cysts and cysts of the broad ligament may have serous or colloid contents; but the latter is common in ovarian cysts, rare in extra-ovarian cysts, while watery fluid is common in extra-ovarian cysts, rare in ovarian cysts.

32. Uterine *fibro-cysts* are very rare. All cases in which a sufficiently large quantity of fluid was withdrawn and coagulated spontaneously, promptly, and completely, have proved to be fibro-cysts of the uterus. But coagulation takes place only in the fluid from a minority of uterine fibro-cysts. The presence of a fluid which, after long exposure to the air, precipitates fibrinous clouds, or which gelatinizes on addition of blood or serum, does not prove that it comes from a fibro-cyst.

33. Atlee's fibre cell is not always found in uterine fibro-cysts, and may be present in ovarian cysts.

34. None of the other microscopical elements, more or less changed epithelial cells, found in uterine cysts have any diagnostic value.

35. Columnar epithelial cells are never found in uterine cysts.

37. It is doubtful if the fluid of dropsy of the Fallopian tubes can be distinguished from that of ovarian or uterine cysts or those of the broad ligament. . . .

39. Cysts *in the abdominal wall* may occasionally become so large as to simulate ovarian cysts. The fluid differs from that of ovarian cysts by being limpid, serous, lemon-coloured, and devoid of epithelial cells or their derivata.

40. The fluid from *urachus cysts* differs from ovarian fluid by containing *flat* epithelial cells.

42. A single hooklet or the smallest piece of cuticula is pathognomonic for echinococci, but they are not always found in the fluid coming from these tumours. It is without albumen, or contains only traces thereof. But this may also be the case with ovarian cysts. It contains succinic acid, lucine, grape sugar, inosite, traces of which have even been found in ovarian cysts. Uric acid and urea have been found in both kinds. Paralbumen has never been found in echinococci. Thus the differential diagnosis can be made by chemical and microscopical examination.

43. Cysts of the mesentery can be distinguished from ovarian cysts by containing serous fluid without epithelial cells.

46. Hydronephrosis may sometimes be differentiated from an ovarian cyst by the presence in the fluid of a large quantity of urea, flat epithelial cells, and by its acid reaction. A small amount of urea may be found in both. Paralbumen has been found in hydronephrosis. When no kind of epithelial cells are found, and the chemical composition is not characteristic, the diagnosis may be impossible.

47. Renal cysts of large size are rare. Their contents may be very like those of ovarian cysts, especially be full of nuclei with shining granules, and form a coagulum by heat, which is dissolved by boiling acetic acid in excess. The microscopical appearance is not characteristic. Sometimes urea in large proportions and uric acid are present, which settles the differential diagnosis; but at other times there is none. Sometimes flat epithelial cells are found, at other times the characteristic short columnar and cubic epithelial cells. The long columnar epithelial cells found in ovarian cysts are never found in renal cysts. . . .

48. A cyst of the pancreas, built exactly like an ovarian cyst, contained a fluid differing from ovarian by the acid reaction, the uniform small size of the nuclei, and the presence of peculiar thready bodies.

50. Ascites can sometimes be recognised by mere inspection. The specific gravity cannot be used for a diagnosis. As a rule, some spontaneous coagulation takes place, but sometimes not.

On the other hand, ovarian fluid may coagulate spontaneously. Scherer's test for paralbumen has no value for the differential diagnosis. It can always be made by the microscope, showing flat endothelium and amœboid lymph corpuscles. Ascites arising from cancer of the peritonæum differs, perhaps, from simple ascites by containing large round or pear-shaped endothelial cells, with large nuclei, either isolated or in groups. It differs from ovarian fluid by the same characters as simple ascites.

52. Ascitic fluid mixed with ovarian is full of endothelial cells and flakes, which undergo fatty degeneration. Amœboid and lymphoid bodies are found together with columnar epithelial cells.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

BICARBONATE OF SODA IN TONSILLITIS AND ENLARGED TONSILS.—Seven cases of tonsillitis cured by the use of bicarbonate of soda are reported by Dr Armangue in *Revue de Therapeutique*. The method was introduced by Dr Gine, Professor of Clinical Surgery. What is still more remarkable, these cases are said to have all been cured in less than twenty-four hours. The mode of employing this agent is either by insufflation, or directly applied by the finger of the patient. The alleviation is almost always immediate, and rarely delayed more than twenty-four hours. The frequent application of bicarbonate of soda is said to reduce the size of the gland in hypertrophy, and thus render excision of the tonsils unnecessary. *The Therapeutic Gazette*, August 1882.

A NEW REMEDY FOR TAPE-WORM.—According to Dr H. Witt (*St Petersburg Medical Weekly Journal*, April 1882), the alkaloid pelletierinum, lately extracted from the bark of the root of the pomegranate, is the most certain of all remedies for tape-worm. In five cases where all other remedies had failed, about twenty-two grains of this drug, followed by a tablespoonful of castor oil, killed the worm, which appeared unbroken in the stool. The remedy is said to be perfectly tasteless.—*The Therapeutic Gazette*, August 1882.

OLEATE OF MERCURY WITH PETROLEUM IN THE TREATMENT OF CHRONIC RINGWORM.—Dr Alder Smith of London, in the *British Medical Journal* of 7th October, says, "On many occasions I have advocated the use of oleate of mercury for the treatment of chronic ringworm; but it does not seem to be generally known what a very valuable oleaginous preparation we possess in this drug. I constantly see cases of ringworm, which have resisted all forms of treatment for months, or even years, yield to a long-continued course of oleate of mercury; while, on the other hand, I have never seen a single case cured by any of the numerous remedies which have been proposed for this troublesome complaint (except croton oil and other irritants) after it has resisted the action of oleate of mercury. The oleate certainly penetrates deeply into the follicles, and this is most essential in the cure of ringworm. The chief drawback to its use is the constant formation of yellow crusts on the diseased patches, and even on the non-infected portion of the scalp. These scabs have to be continually picked and scaled off; and, though they often bring away many diseased stumps with them, yet are a constant annoyance to patient and nurse. Chiefly to obviate this, and also because I think it a more valuable preparation, I have for some months been using oleate of mercury dissolved in a heavy petroleum oil instead of in oleic acid, and, from the results I have seen, feel fully justified in recommending this stable and convenient preparation as the most efficacious parasiticide I know of for chronic ringworm; it is made by dissolving ten parts of oleate of mercury in ninety parts of heavy petroleum oil. This appears, also, to be less liable to decomposition than the ordinary oleate dissolved in oleic acid. I have, besides, found that this preparation causes much less irritation to the scalp, and that even children under seven years of age can bear the ten per cent. solution well. If the patient be younger than this, it can be diluted, if necessary, with ordinary petroleum or crystal lamp oil.”

THE ACTION OF CUNDURANGO ON CARCINOMA.—A comparative statement of 132 cases of cancer of the abdominal organs, and particularly of the stomach, which were studied with the view to definite results, and which were, for the last three years, almost all treated with cundurango, in the *interne* department of the hospital at Basel, is given by Hoffman in his inaugural dissertation. The patients treated without cundurango were in number 108.

Of these there were reported uncured . .	22
” ” ” improved .	10
” ” ” as having died	70

Those treated with cundurango numbered 20.

Of these there were reported uncured . .	2
” ” ” improved .	8
” ” ” as having died	10

In the second group should be included four other cases under cundurango treatment where the progress is quite satisfactory. The discussion of these cases leads Hoffman to the following conclusions, namely:—(1.) That cundurango is not an infallible remedy in cancerous affections; indeed, quite unfavourable results have been observed to follow its use. (2.) In isolated instances, a direct influence upon the tumour is demonstrable. (3.) Certain symptoms, such as vomiting, severe pain, loss of appetite, impaired digestion, emaciation, very frequently disappear under the persistent use of cundurango. Its indication is, for this reason, particularly insisted upon in such conditions. Senator in Berlin, who refers to this essay in his *Centralblatt*, declares that the above results find confirmation in a number of personal observations (*Wien. Med. Blätter*, 1882).—*Therapeutic Gazette*, August 1882.

RESORCINE IN DIPHTHERIA.—The employment of this absolutely harmless medicament in acute and chronic skin diseases of an infectious nature was fully tried and recommended by Andeer some months ago. He has obtained a further therapeutic use of resorcine with equally satisfactory results in diseases of the mucous membrane of the throat and mouth. The author has treated, since 1877, many cases of diphtheria of the pharynx, mouth, nose, and other parts of the body with resorcine, and with this agent his results have been far better than were obtained by him with other medicines. In mild cases of diphtheria it suffices to simply cauterize with resorcine crystals or a concentrated resorcine-vaseline ointment; in moderately grave cases repeated applications of the ointment; and in the gravest cases resorcine must be given internally as well as applied locally. By means of this method, which, by reason of its simplicity, is to be recommended, 222 cases of diphtheria were treated, and all cured (Dr Justus Andeer, in *Centrablatt für Med. Wissenschaften*, No. 20, 1882).—*The Therapeutic Gazette*, August 1882.

NITRO-GLYCERINE IN THE TREATMENT OF ANGINA PECTORIS.—Mrs F., æt. 42, well nourished and of good physique, apparently a healthy woman, was the subject of regular and severe attacks of angina pectoris. At first the attacks came on irregularly, mostly at night, and always after midnight. After continuing for several months in that manner, the paroxysms being at first two or three months apart, they became more frequent, and during the year 1882, in March, April, and May, the attacks came on regularly every morning between two and six o'clock, causing the most violent and excruciating pain imaginable. During the beginning of the attack, when the paroxysms were irregular, the opiates, bromide of potassium, single and combined with chloral hydrate, were freely used, with but temporary benefit. Quinia and opiates were likewise used persistently and in varied doses, with anything but satisfactory results. In fact, the Materia Medica was well-nigh exhausted of its neurotic remedies in this case without affording the relief sought. The case continued under strict and persistent treatment for nearly a whole year, and no permanent benefit was ever obtained until the administration of nitro-glycerine was begun. Having procured two hundred of Parke, Davis, & Co.'s 1-25th of grain pills of nitro-glycerine, I began their administration, giving one every four hours. In about nine days after the administration of the pills, loss of vision supervened, pain and fulness in the head were complained of, weakness of the lower limbs, and intense susceptibility to noise were annoyingly present. An omission of the remedy for five or six days brought relief from all of these unpleasant symptoms. The remedy was then again taken up, and prescribed one pill three times daily, and whenever the unpleasant visual troubles manifested, the remedy was either dropped in the middle of the day, or missed altogether until the following day, when it was ordered to be resumed. It is now six weeks since the pills were begun, and there has not since been an attack of this troublesome disease. After the pronounced specific effects of the drug were first manifest upon the nervous centres, as evidenced by the symptoms before indicated, every vestige of the heretofore troublesome angina vanished almost as by magic. There may be others who have as obstinate a case as I have just detailed, and I feel safe in recommending the nitro-glycerine pills as the remedy they are looking for.—D. O. C. Farquhar, in *The Therapeutic Gazette*, August 1882.

PERISCOPE OF OTOLOGY.

By Dr Kirk Duncanson, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

Injury to the Head: Slight Concussion; Rapid Accession of Coma, and Death.—The patient, aged 15, a rather anæmic-looking boy, was brought to the London Hospital on 29th April. He was said by his friends to have taken a dive into the river, striking his head with violence on the bottom. The symptoms agreed with this account, the patient being on admission in a dull and semi-unconscious state, complaining only of headache, and apparently suffering from slight concussion of the brain. He was kept at rest with ice to the head, and three days after admission seemed nearly well, and wanted to go home. He would probably have been discharged, had no further symptoms occurred, the next day. The same night he again was attacked with intense headache. The pupils were dilated, no paralysis was present, speech became an evident exertion to him, and, on bidding, he performed movements, such as protruding the tongue, etc., after an interval. There was now noticed for the first time a slight purulent discharge from the left ear. One of the patients in the ward was told by the father of the boy on this day that a discharge had been present before admission, for which he had been under treatment outside, and also that he had previously suffered for some time with headache. This was the first intimation that the boy had been out of health, notwithstanding inquiries made of the friends. Symptoms next day were increased, and the patient died on the fifth day after admission, having been comatose for about an hour before death occurred.

The condition of the discs just before death pointed to commencing neuritis, the margin presenting a woolly appearance. On post-mortem examination, the dura mater was found adherent to the brain posteriorly. In the left parietal and temporal region was a blackened spot covering a large abscess-cavity reaching as far as, though not entering, the ventricular space, and containing a considerable quantity of very foul pus. The temporal bone was necrosed, and pus found between that bone and the dura mater. The coincidence of the injury and the brain-mischief is obviously of much interest, as, supposing the boy had been allowed to go home and then died, it would have been impossible to convince his friends that his death was not due to the injury, and that there had been culpable want of care (*Under the care of Mr James Adams*). —*British Medical Journal*, 16th September 1882.

HERPES OF THE TONGUE, PROBABLY ARISING FROM IRRITATION OF THE CHORDA TYMPANI NERVE BY AN AURAL POLYPUS.—F. B., a healthy labourer, aged 30, was admitted 29th November 1881. He said that the present illness began two days before, being the first of the kind he had had. He knew no cause for it, and believed himself to have been quite well until then. There was great swelling of the tongue and floor of the mouth, mainly in the right side, and extending backwards to the root of the tongue. The surface of the mucous membrane was quite healthy, and the parts below the jaw were not at all swollen. Swallowing was almost impossible, but there was little pain beyond a sense of heat and a feeling of fulness or tightness about the tongue and throat. Occasionally there was some slight dyspnœa; temperature 99° Fahr. The patient was kept in bed, purged, and carefully watched, lest laryngotomy might become necessary. On the 30th the swelling had greatly increased; the tongue was pushed up to the roof of the mouth by the œdema of the right side in the floor. Speech was no longer intelligible, and swallowing impossible; respiration not obstructed; temperature 101° Fahr. Attempts to examine the throat were so painful that the patient was etherized and a careful examination made. The swelling was found to be limited to the anterior part of the mouth and tongue. The fauces were not themselves œdematous or inflamed, though closed by the swollen tongue being pushed back against them. The cheeks and soft parts below the jaw were not brawny, nor enlarged beyond slight fulness. There were no enlarged lymphatic glands, and breathing through the nose was not impeded. In the forenoon of 1st December a group of vesicles appeared on the right side of the tongue and floor of the mouth, and the patient made signs that he was somewhat less distressed. Towards evening he managed to swallow beef-tea by spoonfuls. During the night the swelling rapidly diminished, and on 3rd December was almost gone. On 4th December a purulent discharge was observed to escape from the right ear. This was wiped away, and a pedunculated polypus was found growing from the side of the meatus and lying against the membrana tympani. The growth was removed with a snare, and the meatus washed with dilute zinc lotion. The patient now recollected that a few weeks before he had had earache occasionally. On 5th December the mouth was perfectly well, and after a few applications of nitrate of silver to the stump of the polypus that healed soundly. The interest of this case lay in the apparently alarming condition of the patient, and in the facility with which the swelling might be mistaken for dangerous inflammation from stings, caustic poisons, other forms of glossitis, or even, at first sight, for suppurative inflammation of the deeper layers of cellular tissue below the jaw. This affection is exceedingly rare. Similar cases have been recorded.—*British Medical Journal*, 7th Oct. 1882, p. 683.

OCCASIONAL PERISCOPE OF DERMATOLOGY.

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

NAPHTOL IN SKIN DISEASES.—More than a year has elapsed since this remedy was introduced by Kaposi, and since his last communication he has employed it in more than 1000 cases. In none of these did any untoward result manifest itself; still he recommends that the drug should be used with certain precautions, and that β naphtol only should be prescribed and dispensed. It is specially useful in the treatment of scabies, of ichthyosis, and prurigo. In scabies, one inunction with a salve having the following composition is sufficient to cure:—

℞ Adipis vel.	
Ung. simp., .	100
saponis mollis, .	50
Naphtol, . .	15
Cretæ preparatæ,.	10
M. Ft. ung.	

If there is no great amount of eczema complicating the scabies, even hospital patients can be discharged after one day's treatment; and even when severe eczema is present it more rapidly disappears than when some other modes of management are employed. In infants or young children the proportion of naphtol should be reduced to 10 per cent. or 5 per cent. In prurigo, both mitis and agria, the results have been extremely satisfactory. An ointment of 5 per cent. naphtol is to be rubbed each night into the extensor surfaces of the upper and lower extremities, and on the sacral region, where the prurigo papules are mostly found, and the parts thereafter dusted with powder. In children between the ages of 2 and 7 he acts as follows:—Every or every other evening the child is washed with a naphtol and sulphur soap in a warm bath, the parts affected with prurigo being firmly rubbed, and in an hour the soap washed off with ordinary toilet soap, carefully dried, and 3 per cent. naphtol ointment smeared on. This is also used on those nights when no bath is given. When improvement occurs, usually within from one to three weeks, the frequency of the applications must be diminished. Equally convincing were the effects of its use in ichthyosis. The patients were rubbed once or twice a day with a 5 per cent. naphtol ointment, and the skin soon became smooth and pliant, while any complicating patches of eczema rapidly disappeared. In more severe forms, a course of frictions with 2 per cent. of naphtol to soft soap, and occasional baths with naphtol sulphur soap, was persevered in till a moderate degree of epidermic peeling occurred, then the inunction with 5 per cent. salve was commenced. Both prurigo and ichthyosis demand continuous attention to the skin, even when no lesions are seemingly present. It suffices in general to take a bath once or twice a week with the naphtol soap, and every second or third day to apply the naphtol salve. When the patient first comes under observation with a weeping, encrusted eczema, this must be treated, and the eczema reduced to a more quiescent stage, before the naphtol is commenced with. Naphtol is also useful in psoriasis, in acne, in seborrhœa, and in hyperidrosis. Acne can be treated by washing at night with the naphtol and sulphur soap, allowing the latter to dry on and remain during the night, to be washed off in the morning. These medicated soaps can be obtained from C. von. Waldheim, apothecary, 1 Himmelpfortgasse, Vienna.—*Wiener Med. Wochenschrift*, Nos. 30 and 31, 1882.

AN ALLIED FORM OF PITYRIASIS RUBRA.—Under this name Dr Halsey L. Wood, of the Michigan Asylum for the Insane, describes a peculiar form of skin disease having the main characters of pityriasis rubra, but presenting deep pigmentation of the epidermis prior to exfoliation. There were no constitutional symptoms save rise of temperature and pulse for a time, coincident with the acme of the dermatitis. The mucous membranes were not implicated. At all stages and in all parts there was an absence of any tendency to eczematous inflammation, and an entire absence of deposit in the skin, or of thickening. The patient was a female, aged 34, suffering from recurrent mania. The disease began in the feet, with prickling sensations, swelling, redness, and œdema, followed by desquamation. It next invaded the neck, forehead, chest, and abdomen, with extensive pigmentation and copious exfoliation. Complete recovery took place in two months. The treatment was supporting, and, in the main, "expectant."—*New York Medical Record*, June 10, 1883.

PYROGALLIC ACID IN THE TREATMENT OF ONYCHOGRYPHOSIS.—Campana is of opinion that there is hardly any acid so efficacious in hypertrophy of the epithelium and papillary body as pyrogallic acid. No other caustic yields a drier or better defined eschar. In particular, in a case of idiopathic onychogryphosis, where the most varied measures produced no result, the employment of pyrogallic acid in about a week caused great improvement, and, shortly after, complete cure.—*Viertelj. für Dermatologie und Syphilis*, 1 Heft, 1882.

ON THE ETIOLOGY OF RHINOSCLEROMA.—Various views have been held as to the position this curious disease should take in classification. Kaposi refers it to the group of granulation sarcomata of Virchow, while Mikulics regards it as more of an inflammatory nature. Professor v. Frisch of Vienna, from an examination of specimens from twelve cases, associates it with a bacterium of a peculiar kind. All observers have found numerous round cells leucocytes, but Frisch has discovered within these cells bacterial rods. The older the specimen the more numerous were large cells, which seemed like dropsical leucocytes; and while the bacteria were found sparingly present in the round cells of normal size, in these swollen cells they existed in large numbers. As the numbers of the bacteria increased, the nuclei of the cells became obscured, till they ceased to be visible. He regards this destructive metamorphosis of the cells to be directly referable to the presence in them of the bacteria. The disease in the cells progresses from a centre. First one cell becomes invaded by the bacillus, then adjoining ones, and so on till an area more or less extensive is implicated. Some of the round cells, however, become transformed into spindles, and even some of these contain bacteria, while stray bacteria can be met with also in the interspaces between cells and fibres, free. The growth into spindles, Frisch thinks, is occasioned by the stimulus excited by the presence of the bacteria, much in the same way as areolar tissue is produced round caseous masses in tuberculosis. "The extraordinarily slow course of the disease, the formation of tubercles in the skin, the discovery of rods in the cells, and, finally, the occasional appearance of smooth, atrophic cicatrices in spots previously the seat of nodules, remind one much of leprosy." Yet the processes are entirely distinct, and, in rhinoscleroma, are of a chronic inflammatory nature.—*Wiener Medizinische Wochenschrift*, 12th August 1882.

A CASE OF TUBERCULAR LEPROSY ORIGINATING IN CONTAGION.—Dr Edmonson Atkinson records a case of leprosy in which the evidence of the disease having been acquired by contagion is very strong. The patient, aged 40, was born in Baltimore of German parents. She first noticed any cutaneous disorder, when pregnant in 1878, as yellow spots on her thighs. This developed into well-defined leprosy, exhibiting both the anæsthetic and the tubercular forms. When again pregnant in 1880, the disease made more rapid strides, to subside into a more quiescent condition after delivery.

Besides presenting all the clinical characters of leprosy, Dr Bermann found the bacillus lepræ within the large lepra cells described by Virchow, in sections made from the lobe of the ear affected with the disease. For several years from 1871 the patient lived in the same street as, and for some time next door to, a man affected with leprosy, whose case is recorded and whose portrait appears in G. H. Fox's *Atlas of Skin Diseases.* She denies ever having touched this man, but she visited his wife, and the man himself was several times in her house. He apparently acquired his leprosy in Cuba. Only two other instances of leprosy are known to have occurred in Baltimore in recent years, so far as Atkinson could learn.—*Archives of Medicine*, June 1882.

THE BACTERIA OF LEPROSY.—Cornil gives some additional facts with regard to these, especially as to the situations in which they are found, and their relations to the tissue elements. In the tubercles of the skin they are best seen with an immersion lens magnifying from 500 to 800 diameters. They are found in great numbers in the large cells, described by Virchow, which abound in the tubercles of the skin, as well as in the neoplastic growths occurring elsewhere. They are found existing free in the tubules of the testicle, and are of five or six times the size of those met with in the skin. In the protoplasma of cells, and in the detritus accumulated in the tubules of the testicle or in the bloodvessels, masses of free spores are met with. [May this fact of the bacteria and their spores being found in the tubules of the testicle not have an important bearing on the transmission of the disease, and on its assumed hereditary nature?—W. A. J.].—*Union Médicale*, Dec. 25-27, 1881.

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PERISCOPE OF OPHTHALMOLOGY.

By GEORGE A. BERRY, M.B.

ON THE THEORY AND PRACTICE OF SO-CALLED KERATOSCOPY.—The method of determining, both qualitatively and quantitatively, the state of refraction of the eye, to which the name of keratoscopy was given by its discoverer, Cuignet, has been the subject of several papers in foreign scientific journals. In the last number of the *Royal London Ophthalmic Hospital Reports* (August 1882) Dr Charnley gives the most lucid explanation which we have as yet seen of the optical appearances which guide one to a diagnosis. His treatment of the subject is exhaustive without being long-winded, and cannot be too highly recommended as a guide to any one who may wish to add this method to those with which they are already familiar. It is the only objective method which can compare at all favourably with the ordinary subjective tests, as far as ease and rapidity of application are concerned, in all forms of errors of refraction. Fortunately, owing to the absence of conscription, subjective examination is more generally useful in this country than in most foreign states, but not a few cases occur in which it is advantageous to be independent of the statements made by patients. A quantitative test which, whilst entirely objective, neither necessitates a knowledge on the part of the observer of the exact state of his own refraction, nor obliges him to control the action of his accommodation, and is at the same time rapid and easy, has been for long an undoubted desideratum. Such a test is given us in Cuignet's method. Dr Charnley's estimate of it we must give in his own words. He says, "I think it is superior to other objective methods, especially in the ease and certainty with which it enables us to determine the principal meridians of an astigmatic eye. For my own part, I always employ it when I suspect astigmatism, and in children for the correction of even a spherical anomaly. It has been extensively tried in England since its first introduction here, and I know scarcely an instance in which it has been fairly tested and failed to please." The method consists in reflecting the light from a lamp or gas-burner, placed at the side of the patient's head, into his eye, from a distance of about 4 feet. For this purpose it is best to use a concave ophthalmoscopic mirror (held in the ordinary manner in front of the observer's eye) of about 9 inches focus. The distance from the patient's eye of the luminous image, from which rays diverge towards it, is then roughly one mètre. If the side of the patient's head be well shielded from the direct light, and the mirror be slightly rotated round a vertical axis, a shadow will be seen to pass across the illuminated fundus if there be any hypermetropia or any degree of myopia greater than 1 D. From the *direction*, *rapidity of movement*, and *brightness* of this shadow, the qualitative diagnosis of the state of refraction is made. By repeating this process with spherical or cylindrical glasses placed in front of the patient's eye, the degree of the ametropia may be inferred with sufficient approximation. The *shadow* which is seen is the edge of the more or less blurred image of the source of light, which, after reflection from the mirror and refraction into and again out of the eye, lies at the far point of the eye. A little consideration will at once show that this blurred image, and therefore the shadow, will move *with* the mirror in myopia, and *against* it in hypermetropia, and, further, that the rapidity of movement will diminish as the ametropia increases. But it is not at first sight so easy to predict what should be the relative distinctness of the shadow in different cases. To do this we must calculate the size of the second blurred image, that one which results from the second refraction through the eye, in different states of ametropia. This Dr Charnley has done by a simple algebraical calculation, for the details of which we must refer those interested to the original paper. The result, however, is that the distinctness of the shadow increases with the degree of the hypermetropia, but is less the higher the degree of myopia. In the case of astigmatism, if *simple*, there is only a shadow moving with maximum rapidity at right angles to one particular direction of axis of rotation of the mirror, and not at all in the direction at right angles to that, the movement being with or against the mirror according as the case is one of simple myopia or simple hypermetropic astigmatism. If *compound*, there will be a direction of maximum or minimum rapidity of shadow, both moving either with or against the mirror; and if *mixed*, the shadows will move in opposite directions. The following is Dr Charnley's own *résumé* of the method of proceeding:—

> "The usual precautions as to light, position of the patient, etc., being observed, I direct the light into the patient's eye. If the fundus-reflex is dull, the Ametropia is high; if bright, low. I now make small rapid rotations of the mirror so that the circle of light on the patient's face travels horizontally and vertically in succession. If the shadow travels horizontally and vertically respectively, there is not much Astigmatism with principal axes oblique. I now make oblique rotations of the mirror in one or two directions; if the shadow still moves parallel with the rotations, there is not much Astigmatism at all. The direction of movement of the shadow 'with' or 'against' has indicated Myopia or Hypermetropia.
>
> "I now proceed to 'correct' the eye. The patient is fitted with a spectacle-frame having a double clip before each eye, and I place in the frame before the eye a positive or negative lens, according as the rotations of the mirror have shown the eye to be myopic or hypermetropic. The strength of the lens selected depends upon the judgment I have formed of the amount of Ametropia, from the intensity of the fundus-reflex, and the extent of movement of the shadow. With some experience, an approximation to the correcting lens may be made at the first trial. I now see how the shadows move in the eye armed with the lens placed in the frame. If they still move in the same sense as before, I know the eye is still under-corrected, and increase the strength of the lens in the frame, either changing it for one stronger by 1 D., or placing before it in the second clip of the frame an additional lens of 1 D. of the same sign. I test the effect of this new (combined) lens by horizontal and vertical rotations of the mirror, as before. If necessary, I increase the strength of the lens still more, by successive increments of 1 D., until either I reach the stage of correction, when no distinct shadows are seen; or the shadows move in a direction opposite to that in which they originally moved. In the latter case I know that the eye is now over-corrected, and reduce the strength of the lens by 0·50 D. This probably 'corrects' the eye. If it does not, I accept it as an approximation, knowing that it differs from the 'correcting' lens by certainly less than 0·50 D., and having in view that the final test is with the types at 20 feet.
>
> "As the stage of correction is being approached, the characteristic appearances of low degrees of Ametropia are noticed, viz., bright fundus-reflex, and increased extent of movement of the shadow; not unfrequently, too, Astigmatism that had previously escaped notice, manifests itself by the appearance of an oblique shadow. If this is not the case, and the horizontally- and vertically-moving shadows produced by horizontal and vertical rotations of the mirror disappear with the same lens, I know there is no Astigmatism.
>
> "I have now reached the stage of 'correction,' and am prepared to find that the 'correcting' lens will have to be slightly diminished if convex, increased if concave, to give the best vision at 20 feet. If, with the horizontal and vertical rotations of the mirror, one of the horizontally- and vertically-moving shadows has disappeared before the other, or come to move in the reverse direction, I know there is Astigmatism with the principal meridians, horizontal and

vertical. I proceed then to 'correct' each of these meridians separately by making the rotations of the mirror in the direction of the meridian under examination, and finding what spherical lens makes the shadow moving in the direction of this meridian disappear. I put up then a sphero-cylindrical combination which 'corrects' both axes, and then expect to get no shadow in any direction. I am prepared to find that this combination requires slight spherical alteration to give the best vision at 20 feet.

"If at any stage of the examination Astigmatism with principal meridians oblique has manifested itself by obliquely moving shadows though the rotations of the mirror are horizontal and vertical, I note the directions of the principal meridians, transfer the rotations of the mirror to the direction of each meridian in turn, and correct them precisely in the same way as if they were horizontal and vertical."

PURULENT OPHTHALMIA PRODUCED BY INFUSION OF JEQUIRITY.—Jequirity, a leguminous shrub (*Abrus precotorius*) has been for centuries a popular remedy amongst the Brazilians for granular lids and pannus. An alkaloid prepared from the beans was tried by De Wecker of Paris, and found not to produce the slightest effect, either by instillation or subcutaneous injection. Some time after making these experiments he received from an old patient in Brazil a parcel of these beans, with the request that he would try their effect in a way which had produced a radical cure in his own case. De Wecker's patient gives the following as the mode of preparation:—"32 beans (about 3 gr. 20 mgr.) are powdered, and macerated for 24 hours in 500 grs. of cold water, after which the same amount of hot (boiling?) water is added, and the infusion filtered immediately after cooling." This is used as an eye-wash three times in one day, the patient being kept in the dark. In some cases it is necessary to repeat the same treatment for one or two days longer. A few hours after the first application a severe conjunctivitis sets in, which becomes purulent on the third day. "This lasts five days, after which it gradually subsides until the fifteenth day, when the patient is freed at the same time of his inflammation and granulations. The corneal opacities then clear more and more up from day to day." De Wecker has made a series of experiments with the infusion, with the following results:—(1.) The infusion is a certain and speedy means of producing a purulent ophthalmia, the severity of which is increased by applying it directly to the conjunctival surface. In most cases a sort of croupous membrane covers the conjunctiva. (2.) It has this great advantage over inoculation with pus, that it is possible to regulate the severity of the inflammation. (3.) The effect on the granulations was astonishingly favourable. As to its effect on corneal complications he says, "A more extensive experience will be necessary to determine whether the ophthalmia jequiritica acts favourably or unfavourably on the ulcerative processes in the cornea. It appears so far undoubted that the effect is favourable, which, as we know, is not the case with inoculation.—*Klinische Monatsblätter*, Sept.

NIGHT-BLINDNESS: NYCTALOPIA OR HEMERALOPIA?—Following immediately on an interesting philological paper by Dr Greenhill, Mr Tweedy seeks to establish still more firmly the claims there put forward in favour of nyctalopia as the proper scientific expression for night-blindness. This he does in a manner which, though scholarly in itself, cannot fail to be comprehensible to others who lay no claim to scholarship. It must be admitted that the evidence is all in favour of nyctalopia originally being used to designate the state of night-blindness, and unless any strong argument can be adduced in favour of hemeralopia, other than that it has been the term generally, though not exclusively, used during the last two centuries, we think we cannot do better than go back to the much more ancient nyctalopia. Mr Tweedy's arguments are shortly as follows:—(1.) All authors defining nyctalopia up to the middle of the seventeenth century, with the single exception of Hippocrates, have given it the sense of night-blindness. (2.) Night-blindness being much more common than day-blindness, the word nyctalopia, in the absence of hemeralopia, which is not found till later, was more likely to refer to it. (3.) If nyctalopia do not denote night-blindness, we must believe that Hippocrates either did not recognise or ascribed no importance to that condition. (4.) The description given by Hippocrates of the concomitant symptoms of nyctalopia agree with those given by authors who refer to nyctalopia as night-blindness, and are, indeed, those of scurvy. (5.) The passage in the second book of the Prorrhetics which has given rise to the confusion is altered in sense by the addition of an *οὐ*. There is very little doubt that this is a clerical error in the manuscript. It reads as follows:—"*Οἱ δὲ τῆς νυκτὸς ὁρῶντες οὓς δὴ νυκτάλωπας καλέομεν.*" *Οὐχ ὁρῶντες* would bring Hippocrates into concord with all other writers. A few less weighty arguments help to swell the evidence in favour of nyctalopia.

THE SOURCE OF NOURISHMENT OF THE CORNEA.—Until quite recently it has been generally believed that the cornea draws its nourishment from the aqueous humour. Ulrich and Denissenko, but more especially the latter, gave very strong reasons for believing that the anterior chamber is only the outlet for the fluids which nourish the cornea, and which pass into it from the surrounding conjunctival and scleral vessels. Their surmises have been shown to be correct in an interesting experimental manner by both Ehring and Pflüger. Ehring injected subcutaneously a fluorescent fluid known as uranin, and observed the way in which a green coloration of the cornea was thus produced. Pflüger made use of another green fluid, a one-quarter per cent. solution of succinyl fluorescein, and noted the manner of its appearance in the cornea. The results were in both cases the same, the greenish fluid issued from the circumference towards the centre, sinking at the same time gradually to the posterior surface, the membrane of Descemet. The only question which has not been definitely decided yet is, whether or not the conjunctival and scleral vessels supply separate and distinct portions of the cornea. Ulrich and Pflüger believe they do, while Denissenko (*Klin. Monatsbl.*, Sept.) gives good reason for supposing that there is no separate supply, the principal reason being that œdema of the conjunctiva is not followed by any similar condition of the cornea.

PERISCOPE OF SYPHILOLOGY.

By FRANCIS CADELL, F.R.C.S. Ed.

THE NURSING OF SYPHILITIC CHILDREN.—This question is discussed by Dr G. F. Lydston in the *Western Medical Reporter*, Chicago, July 1882. The subject has received comparatively little attention at the hands of syphilographers, Fournier, perhaps, having given the subject most attention. His conclusions are, first, that the child of a syphilitic mother should be nursed by her, even if it present no evidence of syphilis, as it will almost inevitably exhibit the disease, and would run the risk of infecting a non-syphilitic nurse. Second, that if the child be syphilitic and the mother apparently healthy, it should still be nursed by her, as there is no danger of maternal infection by the infant. It is a practical fact that in the case of children who have inherited syphilis, but in which the mother has apparently escaped the disease, no clearly defined instances have been reported of the infection of the mother by the infant; and this fact affords the foundation for "Colles's law" so called, viz., that a child born syphilitic will not affect the mother. The reverse is also held to be true, unless the mother's disease is contracted subsequent to delivery. This would imply that it is impossible for a syphilitic child to be born of a healthy mother, or, in other words, that it is absolutely impossible for the father to transmit syphilis to his child without the mother being secondarily infected. Others deny the possibility of the child inheriting the syphilitic taint from the father, excepting secondarily through the medium of the mother. If these views be correct, then the disease must exist in the mother, when she appears to remain healthy, in an exceedingly mild form. This might result from the fact that the disease expends its violence upon the child in utero, or the secondary period of the disease might be represented and replaced by the manifestations which occur in the fœtus, thus exempting the mother from affections of a secondary character, but rendering her none the less liable to the tertiary forms. Hutchinson believes the explanation to be in the manner of the introduction of the virus into the maternal system, using as an analogy the result of inoculation with the virus of variola, which produces a comparatively mild form of disease, while inhalation of the same materies morbi causes variola of the severest type. This implies that the syphilitic poison is modified in some peculiar manner by its passage through the fœtal circulation. If the mother be infected shortly before delivery, and secondary symptoms do not appear until after the birth of the child, it stands an excellent chance of escaping the disease as far as heredity is concerned, although it is in no wise insusceptible to infection by inoculation either through the medium of the lesions present in the mother or by a syphilitic nurse, if such be obtained; and the latter contingency may occur from the fact that syphilitic nurses are intentionally procured in some instances in which the mother is syphilitic but the child apparently healthy, the belief being that syphilis will necessarily develop in the latter, and that it cannot by any possibility escape. It is undoubtedly true that certain persons are insusceptible to syphilis, and that the susceptibility of different persons varies greatly, as in the case of other contagious affections. It would appear, then, more rational to infer, in certain of the cases of children born syphilitic and in which the mother apparently escapes, that she was primarily insusceptible to infection, or that she exhibited a certain power of resistance to it, than to explain the circumstance by "some occult and indiscernible change in the maternal system." Might not the mother have a sufficient power of resistance to enable her to escape infection through the fœtus in utero, and yet remain susceptible to inoculation? It is possible, too, that she may have been insusceptible to syphilitic infection or inoculation during gestation, and yet might at any time become susceptible, the degree of susceptibility varying at different times, as is true of other infectious diseases. In such cases the author would strenuously object to maternal nursing, however slight the danger might be. If the mother and child are both diseased, and the physical condition of the mother be such that she is able to nurse, nursing should be allowed. Otherwise an artificial substitute for mother's milk must be given.

THE PREVENTION OF SYPHILIS.—There is a leader on this subject in the *Boston Medical and Surgical Journal*, 17th August 1882. It says, if a man have small-pox, he is hurriedly isolated; if he have the greater disease, he is at liberty to spread it. An important distinction between the two diseases lies in the fact that one is infectious and the other contagious; and the fact that the latter, being propagated only by contact, is most frequently transferred in the act of sexual connexion, makes of it so low a thing that an American community cannot recognise its existence. The various non-venereal methods of imparting the disease are then pointed out. A proposed Act for the regulation of contagious diseases is quoted. Its noticeable feature was contained in the following:—

Art. III. That the State Board of Health, with the approval of the Governor, and the Health Board of the city of ——, with the approval of the Mayor of said city, shall have power to institute and carry out all suitable measures to prevent the spread of diseases of a contagious character, and may, if deemed advisable, remove to proper hospitals selected by them, all persons suffering from contagious diseases, who, neglecting proper precautions, imperil the health of the community.

The proposed legislative control mentioned above we have little expectation of seeing adopted. At present such an attempt at regulation would probably be a failure; but as a contribution to the discussion of the subject it is an exceedingly wise one, drawing attention to the parallels between venereal and other contagious diseases.

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

An Unexpected Occurrence after Resection of the Pylorus.—On January 3rd I excised the pylorus in the case of a lady who had suffered from a tumour in that region since Feb. 1881. The case is rendered interesting by a failure in the diagnosis and the strange cause of death. The patient, aged 34, was married and had had three children. She had never been confined to bed by any serious illness. On examination, a tumour the size of the clenched fist was found in the umbilical region; its lower border was excavated, and the points of the fingers could be inserted into the notch. The growth was movable from side to side, this manœuvre being accompanied with but little pain. No symptoms characteristic of pyloric stenosis were present. On making an incision in the linea alba over the centre of the tumour a dense, flesh-coloured mass was laid bare, with several large veins coursing longitudinally over its surface. Some glandular masses were adherent to the lower margin of the growth, and on the latter being drawn forward it was recognised as the pyloric portion of the stomach, and its excision was duly proceeded with. The great omentum was first separated, numerous ligatures being applied, and then the tissues divided between them. It was at this stage of the operation that we found that the connexion between the great omentum and the stomach was not limited by the line of the great curvature, but extended on the posterior wall almost as far as the line of the lesser curvature. Hence the great number of ligatures which were found necessary to arrest bleeding after the surface of the greater curvature had been cleared for a good finger's-breadth above the palpable induration. The transverse colon was disinfected with a 2 per cent. solution of tartar-acetic fuller's earth (*Weinsaurer essigsaurer Thonerde*) and replaced in the abdominal cavity. The lower portion of the parietal wound was closed with a provisional suture, so that no small intestine was visible during the whole of the operation. Entrance of fluid into the abdominal cavity was prevented by means of sponges. No spray was used. The small omentum was then separated with some difficulty, but little loss of blood. The pyloric portion of the stomach was now raised, and an incision having been made in it, the contents of the viscus was expressed through the opening. The tartaric solution was again employed as an antiseptic. The stomach was then incised with scissors (in healthy tissue) from the lesser towards the greater curvature to an extent corresponding to the apparent diameter of the duodenal lumen. Meanwhile the stomach was compressed in its middle third by the hands of an assistant. The pyloric portion was now completely separated with the scissors, and hæmorrhage having been arrested, the duodenal and gastric edges were brought into apposition and united by suture. The sponges were withdrawn, the operative area was disinfected, the abdominal wound closed, iodoform powder sprinkled on the surface, and a Lister's dressing applied over all. There was no attempt at drainage. The operation lasted five hours, much time being spent in the careful division of adhesions and the application of the various sutures. The extirpated portion of the stomach on the side corresponding to the greater curvature measured 4·8 inches, on that corresponding to the lesser, 3·9 inches, and weighed (after lying in spirit for several days) about 9½ oz. (295 grms.). Microscopical examination showed that the tumour consisted of cells closely resembling white blood-corpuscles; of cancerous tissue there was no trace. There was favourable progress made for five days after the operation. The patient, though very weak, was perfectly sensible, and remained so till her death. On the first day ice and a teaspoonful of champagne every half hour were administered, but later on doses of ext. carnis recens parat., beef-tea, and port wine were given by the mouth. Nutrient enemata were also employed. The abdomen was lax and free from pain. On the sixth day matters changed for the worse. The abdomen became disturbed, pain was incessant, temperature, pulse, and respiration rate all rose, the tongue became covered with a brownish fur, and the patient died at 6·30 on the morning of 10th January. Although no regular autopsy was allowed, permission was given to re-open the abdominal wound. It was found that the edges of the pyloric gastric wound were still held by the sutures in perfect continuity with those of the duodenal tube; but *a large portion of the transverse colon was gangrenous*, and secondary peritonitis had resulted. All the other pelvic and abdominal viscera were normal. The question arises, How was this unexpected, and, in similar cases, unobserved, gangrene induced? Further experience is doubtless necessary to clear up the matter. In this particular case it is noteworthy that, besides the connexion of the greater curvature with the gastro-colic ligament, adhesions of a very firm and dense description were found involving the posterior wall almost as far as the lesser curvature. Perhaps the weight of the tumour, which during life had greatly strained and displaced the stomach, had caused the development of these abnormal adhesions between the posterior surface of that viscus and the transverse meso-colon. The division of these adhesions during the operation, and perhaps the accidental implication of other vessels going to supply the portion of gut in question, together with the want of a sufficient collateral circulation, had led, in all probability, to the gangrene which brought the case to a fatal termination.—Carl Lauenstein, in Separat Abdruck aus dem *Centralblatt für Chirürgie.*

POLYPAPILLOMA TROPICUM (FRAMBŒSIA).—Charlouis, surgeon to the Dutch Army in Java, describes under the name of papilloma tropicum a disease that only occurs in the tropics, and which, known to the natives under the names of the yaws, piau, etc., is generally called frambœsia by European surgeons, and has given rise to much controversy. It commences in general with high fever and great articular pain, symptoms which are soon followed by a widely diffused papular eruption and painful swelling of almost all the lymphatic glands. The papules enlarge and become covered with crusts, whilst under these papillary enlargements appear. On the mouth, buttock, and penis, and round the fingers and toes, the papules frequently run together and form district ridges. Then a gradual process of resolution sets in, and finally the position of the papules is only marked by a deeply pigmented area. The disease, left to itself, runs an extremely chronic course, and may even last for years without particularly interfering with the patient's health. On examination, the rete and papillary body were found enlarged, and there was an extensive development of granulation cells. The results Charlouis has obtained by inoculation with blood or secretion from the frambœsia papules are of great importance, for they demonstrate most clearly the contagiousness of the disease. Of 32 individuals who had never previously suffered from frambœsia, 28 became affected. Fourteen days after inoculation a papule developed at the point acted on, and was followed by ulceration at the same spot. After three or four months the general symptoms of frambœsia became evident. A further series of inoculations, in persons who had previously suffered from the disorder, showed that such individuals were by no means proof against the disease, for of ten inoculations only three failed. On account of a certain symptomatic similarity, frambœsia is regarded by some authors merely as a modification of syphilis, but Charlouis has been able to refute this theory by inoculating a frambœsia patient with syphilitic pus. A typical induration resulted, with corresponding glandular enlargements,, and after three and a half months a maculo-papular eruption followed. The course of the frambœsia was not in the least influenced by the syphilis. Another patient who had suffered from frambœsia for a long time contracted syphilis (sclerosis in sulc. coron. glandis), and after nine weeks showed all the usual secondary symptoms. The best treatment consists in the internal administration of potass. iodi. or iodoform, and the employment of ung. hydrarg. locally (Charlouis in *Vierteljahrsch. f. Dermat. u. Syph.*)—E. Lesser, in *Centralblatt für Chirurgie.*

NEURECTOMY OF THE SECOND DIVISION OF THE TRIGEMINUS AFTER OSTEOPLASTIC RESECTION OF THE MALAR BONE.—Some time since[1] Professors Braun and Lossen recommended a modification of Lücke's excision of the malar bone, but up to the present time no cases have been published, which demonstrate the feasibility and advantages of the operation in the living subject. In Lücke's operation, the masseter muscle having been divided close to the malar bone, the latter is sawn through anteriorly and divided with bone-pliers posteriorly. The piece of bone, attached now to the temporal fascia, is turned upwards. The contraction after operation was often so great as to necessitate prolonged after-treatment. Braun proposes instead to divide the temporal fascia along the upper edge of the malar bone, then to saw through the body of the bone and to turn it backwards (after fracturing it posteriorly) alone with masseter, which is thus left intact. Professor Czerny has operated in this manner in five cases of trigeminal neuralgia, in the Heidelberg Klinik, and in all of them the resected portion of bone became firmly reunited in a short time, without the slightest displacement. The muscle (masseter) was not able to draw the fragment downwards, the latter being held in place by the toothed fracture posteriorly, and by stitches which brought the divided skin and temporal fascia once more into proper position. In ten or twelve days the patients were able to open the mouth to the extent of 2 cm., and soon the full capacity of movement of the inferior maxilla was completely regained. One case was completely healed in ten days, and another, in which the antrum was laid open, terminated favourably in three weeks. In the other three cases a small artery was injured during the division of the nerve, and there was subsequent suppuration. Rapid healing, however, took place in all. Bleeding from the artery was arrested by pressure, as direct ligature was impracticable owing to the depth of the bleeding point. In all analogous cases, however, an attempt should be made to secure the vessel before pressure is resorted to, as the progress of the case is then less interfered with. The operation leads to little deformity, only linear cicatrices resulting at the lines of incision. After Lücke's operation there are frequently depressed scars over the site of division of the masseter. Whether after division of the nerve in the speno-palatine fossa, more lengthened relief of neuralgia of the superior maxillary branch of the fifth will be observed than after its resection on the infraorbital canal (as Lücke expects), is a question that can only be decided by a greater number of observations. In one of the two cases first operated on the neuralgia recurred in 2¾ years, in the other only nine months elapsed before the pain recurred. In the third case the neuralgia returned ten months after operation, but again disappeared after a few weeks. In the fourth and fifth cases the cure (after eight and four months respectively) is still complete.— Professor H. Braun, in *Centralblatt für Chirurgie.*

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[1] *Centralblatt für Chirurgie*, 1878.

THE ELASTIC BANDAGE IN THE TREATMENT OF VARIOUS SURGICAL DISEASES.—Sée speaks highly of the elastic band in the treatment of the following diseases: 1. Œdema of the limbs due to cardiac, hepatic, or venous disease, or to cachexiæ. 2. As an adjuvant to massage in the treatment of sero-plastic effusions remaining after diffuse phlegmon. 3. Interstitial effusions of blood due to contusions, etc. 4. Chronic serous arthritis after acute joint disease. 5. Circumscribed or diffuse inflammation in all stages of its development. The elastic support here replaces the weakening poultice, and is, besides, superior to the latter through its influence over the blood-flow. 6. Ecthyma of the limbs, and ulcers (atonic, callous, varicose). 7. Recent sutured wounds. The bandage is here applied over a Lister's dressing. Certain general precautions are to be observed, such as extremely slight pressure, exact overlapping of each turn, and the elastic band to be changed every two or three days and washed in a solution of carbolic acid. The bandage acts by its constant equable pressure, it also retains the cutaneous secretion (thus acting more or less as a tepid compress or poultice), and by preventing the entrance of spores, etc., effectually aids the antiseptic dressing (Sée in *Bull. et mém. de la Soc. de Chir. de Paris*).—Walzberg, in *Centralblatt für Chirurgie.*

ON GASTROSCOPY AND ŒSOPHAGOSCOPY.—Mikulicz first describes the œsophago-gastroscope and its method of introduction, and then gives an account of the appearance of the healthy œsophagus as observed with the instrument. The mucous membrane is of a uniform pale red colour, with fine vessels running through it here and there, moist, smooth, and without longitudinal furrows. The entrance to the œsophagus is almost completely closed by the inferior constrictor, and this is true, in fact, of the whole cervical portion of the canal, whilst the thoracic portion as far as the cardiac orifice presents a completely unobstructed lumen. The latter remarkable condition Mikulicz explains by a negative intrathoracic pressure, present alike in the living body and in the cadaver. The passage from œsophagus to stomach is also completely open. Pulsatory (from heart and aorta), respiratory, and peristaltic movements may be distinguished in the walls of the œsophagus. The *gastric* mucous membrane is much more intensely red than that of the gullet. It is frequently smooth, but more often is thrown into deep furrows, and large vessels are seen coursing under it. The movements of the stomach are the same as those observed in the œsophagus. The instrument has been tried in the following cases. The cancerous growth was clearly observed in two cases of œsophageal carcinoma.—A fragment of bone transversely impacted in the tube was recognised and seized (with a hook), and its position being altered, it slid down into the stomach.—In a case of compression of the œsophagus of doubtful character, a pulsating tumour, apparently aneurismal, was recognised.—Two cases of contracting cicatrix.—A case of wound of the mucous membrane from swallowing a fragment of bone.—A case of ulcers above the cardiac orifice, and a case of ulcers in the cervical portion of the œsophagus. In conclusion, Mikulicz observes that whilst a dexterous hand, much practice, and great care are necessary in using the instrument, it can be passed in nearly all cases without any particular previous preparation of the patient (J. Mikulicz, *Wien Med. Press*).—H. Braun, in *Centralblatt für Chirurgie*.

Cavernous Angioma of Intestinal Canal.—This was the case of an elderly female on whom Paci was about to operate for intestinal obstruction brought on by lifting a weight, when (on the tenth day) there was a copious and spontaneous passage of fæces. In the dejections Paci found the tumour above referred to. It was the size of a hen's egg, and contained between its cavernous nucleus and epithelial investment a quantity of extravasted blood. The tumour was attached to a pedicle, and was not macerated. Paci is of opinion that the sudden obstruction was caused either by the interstitial bleeding or through the erection of the cavernous tissue brought on by exertion in lifting the weight. The tumour, previously small, would thus become rapidly distended. The restoration of the passage was due to the breaking away of the growth (A. Paci, "Lo Sperimentale").—Escher, in *Centralb. f. Chirurg.*

Part Fifth.

MEDICAL NEWS.

THE BOSTON SOCIETY FOR MEDICAL OBSERVATION
BOSTON MEDICAL LIBRARY ASSOCIATION

Royal College of Surgeons, Edinburgh. — The following gentlemen passed their final examination for the qualification in Surgery at the sittings held in October, and were admitted L.R.C.S. Ed.:—Frederic William Kirkham, Cambridge; Howard Bennett Fletcher, Sheffield Public Hospital; John Mair Robertson, Galston, Ayrshire; William Wilson, M.B., C.M., Edinburgh; John Logan, Dalry, Ayrshire; John Salter Gettings, L.S.A. Lond., Walsall; Walter Stannes Snell, Stonehouse; Creighton Hutchinson, Kilrea, Co. Derry; John Robert Clark, Cobourg, Canada; Alfred Edwin Schmidt, London.

FIFESHIRE MEDICAL ASSOCIATION.

THE first meeting of the Medical Association was held within the Royal Hotel, Cupar, on Friday, Sept. 29. Professor J. Bell Pettigrew, St Andrews, presided. The gentlemen present were—Drs Constable, Leuchars; Archibald, Moir, and Kyle, St Andrews; Whitelaw, Macdonald, Douglas, and Turnbull, Cupar; Bell and Dow, Dunfermline; Porteous, Kirkcaldy; Spence, Burntisland; Aitken, Buckhaven; Welsh, Kinghorn; Pithie, Ceres; Palm, Largo; Kennedy, Elie; Watson, East Wemyss; Lyall, Leven; Alexander, Leslie; and Blair, Tayport. Dr Lee and Dr Sinclair, Dundee, were present as guests. Dr Joseph Bell, Edinburgh; Dr Baird, Perth; Dr Maclagan Wedderburn, Forfar, and others, had sent letters of apology.

The learned Professor spoke as follows:—It affords me much pleasure to see so many members of the profession present, and I think I may already congratulate you on the success of the Fifeshire Medical Association. My first duty on the present occasion is to thank you heartily for the honour you have done me in asking me to preside at this our first attempt at a reunion; my second and chief duty is to say a word or two in favour of that reunion, and concerning the object and scope of the Association. I use the term reunion advisedly, for, as you are all aware, we are united to each other by University and College ties before we leave the schools, and it is only when we engage in practice and become dispersed over the country that we become disunited. As, however, union is strength, and we are all members of the same corporate body, it is our bounden duty to cleave one to another. As physicians and surgeons, we would not say much for the wisdom of the individual who regarded his own members as aliens; neither could we say much for the members themselves if they strove against each other and refused to act harmoniously for the well-being of the body. As with the body and its members, so with ourselves professionally. The head of the body, from an academic point of view, is the University or College; the limbs of the body, from a professional point of view, is the profession itself, wandering hither and thither in the discharge of its daily duties. What we ought to aim at on all occasions is that the limbs move, not in opposite directions, which would retard progress, but consentaneously and together so as to ensure progress, and, what is very important from our present standpoint, harmonious progress. Old Æsop read a sage lesson to humanity when he wrote the fable of the father and his quarrelsome sons, illustrating his remarks by a bundle of twigs. United, the parent says to his children, like the bundle, you cannot be broken: singly and alone, like the individual twigs, you may readily be snapped in twain. It is the same with us. United, the medical profession is one of the strongest; disunited, it is one of the weakest. Of the several subjects which are likely to engage our attention at subsequent meetings, one of the most important, and regarding which it may be well if I just say a word in passing, is the relation in which we, as practitioners, are to stand to the public. Are we to be the slaves of the public, or are we to be the teachers and leaders of the public? Are we, an educated and liberal body, to be at the beck and call of an unlearned, and in many cases an illiberal one? It is for us to choose. I, for one, if I may be permitted to express an opinion, have no hesitation in saying that it is for us to lead. We doubtless owe a duty to the public, but we also owe a duty to ourselves; and my experience teaches me, as I have no doubt it teaches many others present, that the public is safer in the hands of the profession than the profession is in the hands of the public. No one can accuse the medical profession of being, even in the most remote degree, mercenary. Of the three learned professions, the medical profession most assuredly performs the greatest amount of gratuitous labour. It is, moreover, the hardest worked. The medical journals, unfortunately, attest too frequently the accuracy of these remarks. Scarcely a week passes that we are not apprized of the removal, from overwork or infectious disease, of some eminent medical practitioner in the flower of his manhood, and whose family, it may be, are left entirely unprovided for. This should not be. Such harrowing occurrences are a reproach to the intelligence, the sagacity, and the prudence of the profession. What ruins the profession, especially in towns, is unprofessional competition, and what I must designate commercial rivalry. This rivalry induces one practitioner to undersell, as it were, another practitioner; and the thing is done occultly, and in such a manner that both become, not the servants merely, but the slaves of the public; the public playing off the one practitioner against the other, to the detriment, the degradation, and, in some cases, the destruction of both. This is the bane of the profession. The antidote is not far to seek. The two rival practitioners have only to come together and shake hands, and the matter is amicably settled in favour of the practitioners. I have alluded to the degrading of the practitioner, but there is such a thing even as degrading the public. It is neither wise nor well to pauperize a people. The pauper expects to have everything done for him gratis, and in the most agreeable way. This treatment, while it destroys his self-respect, ruins his independence. It is the same with the public in the matter of fees. To charge too low fees is to pauperize the public in a professional respect. Such action on our part is shortsighted. Moreover, no one is thanked for gratuitously lowering his own status and that of the profession. Even the poor patient despises the advice he gets for the asking. It is the habit of mankind to value lightly that which is purchased cheaply, and this is true not only of physic, but also of common experience. If a patient cannot afford to pay a respectable fee, he should be attended free of charge. Low fees cut in two directions: they lower, as indicated, the status of the practitioner and the profession, and render the needy more needy still. Low fees, furthermore, hold out a temptation to a multiplication of visits, which is bad; as patients may thus be made to pay quite as much as they would have done if the fees had been higher and the visits fewer. Running after patients for small fees engenders familiarity, and familiarity, as is well known, sooner or later breeds contempt. There is, however, no excuse for charging paltry fees in this part of the nineteenth century. Living now is rather more than double what it was fifty years ago; and not only have medical fees not advanced during the period in question, but there is actually a tendency to a retrograde movement, the substitution of the sovereign or the one-pound note for the good old-fashioned guinea. In every field of labour the labourer is worthy of his hire, and the doctor is especially entitled to his. When you remember the many tedious days and sleepless nights required to learn your profession, the cost thereof, and the terrible anxiety preceding examinations, you feel you are entitled to consideration and fair remuneration. But we can take very much higher ground. We are conscious that our skill enables us to confer immense boons on humanity—that, in fact, in our hands, not unfrequently, are placed the issues of life and death. These remarks and many others I could make point most unequivocally to union, and powerful and lasting union—not trades union, with which we have nothing to do, but professional and social union, which binds scholar to scholar and man to man. I place a very high value upon, and attach much importance to, *esprit de corps* amongst gentlemen, and fully believe that all that is wanted in the kingdom of Fife is an association such as that we are now inaugurating, to place medicine on the high pedestal it ought to occupy. By meeting together socially at least once a year, the angles of life will be rounded, and those petty jealousies, which are apt to crop up like so many hydras when practitioners remain isolated, will be effectually suppressed. The Professor then went on to speak of the relationships between members of the profession. It is only natural and proper, he said, that the over-taxed practitioner should occasionally take the field with rod and gun, or, in the case of those who think they have killed enough during the year, with the stout alpenstock or sober gingham. The late Sir Henry Holland set the profession a good example in this respect. He insisted on having his month or six weeks of foreign travel once a year, under all circumstances. The holiday in healthy districts may occasionally be dispensed with, but the inevitable illness must be provided for; and it is on this ground that, even selfishly speaking, we must cultivate the good opinion and kind services of our neighbour. I can imagine nothing more distressing than the case of two rival practitioners in a small town with daggers drawn, one of whom falls seriously ill and requires the assistance of the other. A sentiment of false pride prevents, it may be, the dying man from soliciting the aid of his professional brother; and that brother is ashamed to offer the succour which both his head and his heart assure him is due even to his bitterest enemy. How very different the picture when the practitioners of the small town are hand-and-glove with each other.

Even a serious illness is tided over without grave inconvenience to either party; and gratitude, generosity, and some of the best feelings of our nature are brought into requisition, and both bettered by the unwelcome visitation. If we admit that man is mortal—and there is no getting away from this great and humiliating truth—our friend's, or, be it so, our enemy's illness of to-day may be ours to-morrow; and the all-important maxim of "Do unto others as you wish they should do unto you" is forced home upon us in a way there is no resisting. We, as practitioners and members of the great human family, are mutually dependent on each other. We require a "lean," not only for ourselves, but also for those entrusted to our care. Some practitioners, I regret to say, view consultations with suspicion and disfavour. They think that if a second opinion is desired or required, their own skill is challenged. There can be no greater mistake than this. The patient, it may be, is in terrible pain and terrible suspense, and desires to throw him or herself, as happens, more on the broad breast of humanity. As no one cares to die alone, so the presence of two doctors in many cases assuages the terrors of the approaching end. This feeling of weakness which heralds approaching dissolution is quite natural, and should never be questioned. It exists, and whatever can be done to soothe, solace, and strengthen the patient should be cheerfully and heartily done. Moreover, it is no small matter for the conscientious practitioner himself to have some one with whom to share his own grave responsibilities. A death, however expected, is always an unexpected event; and relatives and friends are only too glad to know that everything possible was done for the patient before the last sad debt was paid. It is clearly our duty to cultivate consultations. The last subject to which I shall allude concerns not the public or the profession, but the individual. Man is naturally a social animal. He is gregarious, and hence the origin and growth of cities and eke associations. He naturally seeks the society of his fellow-men. It is even hinted—nay, broadly stated—that birds of a feather flock together. However all this may be, it is a matter of very great importance that the several individuals of the genus *homo* should occasionally come together to talk over their work, and to throw off their armour and indulge in a little friendly chit-chat. The solitary worker, if let alone, becomes unsociable, and, if too long neglected by his *confrères*, latterly uncharitable. This is a calamity. The best work is no doubt always done by the recluse; but he must ever and anon be coaxed out of his *sanctum sanctorum* and out of himself, to air his knowledge for the sake of his fellow-workers. The experience of the practical man is only valuable if he is a man of reflection and judgment, and if he be properly educated. The experience of a fool is folly pure and simple. The theorist, again, can only lay claim to an imperfect form of knowledge: he must put his theory to the test of observation and experience. We propose, with your valued co-operation, to carry on the fusing, rolling, and amalgamating process at our newly-established Association, at least once a year. There is no need, at the present day, when our tables literally groan with medical literature, to aim at elaborate papers, reports, and discussions. Still, as educated men, it behoves us to keep abreast of the great subject of medicine; and this we can best do by reading at home, and by chatting in a free and easy way, at our annual meetings, over a short paper or address, or over our recent experiences. Man has an appetite for work and another for play, and the object and aim of the Fifeshire Medical Association is to provide for man's compound nature in both respects; and hence I humbly submit that at our annual meetings there should be a short address given by the President of the year, on some medical or social topic, or a short paper or papers read and discussed by the members, and that the proceedings should terminate in a plain, substantial dinner, where the haggis will powerfully contend with John Barleycorn, to the utter discomfiture and annihilation of both. We will in this way best secure "the feast of reason and the flow of soul."

The proposed rules were then considered, and, with a few unimportant exceptions, were adopted. Dr Lumgair, Largo, was elected President; Dr Archibald, St Andrews, Vice-President; Dr Douglas, Secretary; and Dr Macdonald, Treasurer. Dr Constable, Dr Porteous, and Dr Gordon were elected members of Council. Thereafter the company dined together. Professor Pettigrew presided, and Dr Porteous was croupier.

The loyal and patriotic toasts having been honoured, "The Scottish Universities" was proposed by Dr Blair, who paid a compliment to Professor Pettigrew regarding his researches into the anatomy of the heart. "The Fifeshire Medical Association" was proposed by Dr Sinclair, and Dr Douglas responded. Dr Turnbull replied to "The Medical Institutions of Fife," proposed by Dr Dow. "The Medical Profession" was proposed by Dr Whitelaw, and Dr Archibald replied. Forty-seven of upwards of sixty medical gentlemen in the county have joined the Association.

YOU are called to see a sick child. You find that there is much pyrexia. The belly is as hard as a football and as hot as a new loaf, the bowels costive, and the knees drawn up. The whole chest rattles during both respiratory movements. There is vomiting, coughing, shrieking, and a decided tendency to convulsions. You move some of the joints and occasion evident pain. You ransack the patient for a sound and healthy organ, but fail to discover one. Now you are not asked for the diagnosis. That, of course, is *youngsteritis*—or congestion of the entire kid. The question is, What medicinal treatment is to be adopted? Answer:—Your surgery should contain a number of 1½ oz. phials, ready labelled and wrapped up, containing a mixture of aromatic confection, chloric æther, bromide of potassium, bicarbonate of potass, *dill* water, and syrup. A bird-shot prescription is what is wanted to cover the needs of all doubtful and undeveloped ailments: to be useful in every instance and harmful in none.—*Midland Medical Miscellany*, September 1882.

Soluble Hypodermic Tablets, comprĕssed by John Wyeth & Brother, Philadelphia.—Messrs Burroughs, Wellcome, & Co., chemists, London, have sent us a sample of Wyeth's soluble hypodermic tablets of morphia. Each tablet contains ⅛ grain of sulphate of morphia and ¼ grain sulphate of soda. The tablets are compressed into very small compass, melt readily in water, and are very convenient for the purposes of hypodermic injection. These tablets will be found far more convenient than the *injectio morphiæ hypodermica* of the British Pharmacopœia, a preparation which soon changes. We have much pleasure in highly recommending them to the favourable consideration of the medical profession.

Comparative Size of Drops.—The following table approximately gives the average number of drops in a *fluid drachm* of the various classes of U. S. P. preparations:—

Sulphuric ether	174	Mixtures	89
Fluid extracts	141	Vinegars	77
Spirits	141	Syrup not containing fl. extracts	69
Tinctures	136	Solutions (1 exception)	66
Volatile oils	131	Diluted acids	61
Oleo-resins	124	EXCEPTIONS.	
Acids (3 exceptions)	123	Sol. nitrate of mercury	131
Wines	106	Nitromuriatic acid	76
Fixed oils	103	Muriatic acid	70
Syrups containing fluid extracts	97	Sulphurous acid	95

Mr Tait's Brilliant Results welcomed in America.—Mr Lawson Tait then read a paper on "100 Consecutive Cases of Ovariotomy" performed during the last thirteen or fourteen months, and in which he had not used any kind of antiseptic measure. Of these three patients died, one from choking during vomiting, and two from venous thrombosis starting at the pedicle and spreading quite up to the heart. Six of the patients were pregnant at the time of operation, one in addition had acute peritonitis, one of them miscarried, all got well, and five were delivered of living children at term. Four patients had acute peritonitis at the time of operation, and all recovered. In two the tumour was solid fibroma of the left ovary, in ninety-eight it was cystoma, of these eleven were parovarian cysts, sixty were cysts of one ovary only, and among these were the three deaths, and twenty-seven were cysts of both ovaries. In fifty-three cases there were serious adhesions, but he had not found that this factor in any way added to the mortality. Of the three fatal cases there were no adhesions in two, and slight parietal adhesions in the third. In seventeen cases the tumour was sessile. All these cases were dressed with dry absorbent cotton-wool; in about one-twentieth of the cases a part of the wound opened, and then it was dressed with zinc ointment or red lotion. Mr Tait attributed his improved mortality: (1) To the total abandonment of Mr Spencer Wells's clamp; (2) to the thorough cleansing of the peritoneum, as recommended by Keith; (3) to the draining of the peritoneum, as recommended by Keith; (4) to increased personal experience; (5) to the diminished number of cases which had been previously tapped; those (two) of his patients who had died from thrombosis had been tapped, one sixteen and the other thirty times: he believed that if tapping was never adopted there would be no mortality except from tetanus and similar outstanding risks; (6) the complete abandonment of antiseptic treatment; (7) the establishment of hospital discipline and hygiene: this he deemed of so much importance that in only exceptional circumstances would he consent to operate in private houses. Dr Sutton (Pittsburg) had spent a considerable period in studying European surgery, and he stated that in Berlin, Vienna, Halle, Kiel, and Leipsig he found antiseptics everywhere, and such results that on coming to England he dared not have opened the abdomen without employing antiseptics; but then he went to see Keith's practice, and his views were changed; for Dr Keith and his son (who had done five cases) had had a run of fifty cases of ovariotomy with only one death; and he had Dr Keith's authority for stating that he had never used the carbolic spray stronger than was recommended by Professor Lister. He had also seen Mr Tait's practice for three or four weeks, and he had been very careful to watch his practice closely, for he had been told that he was a man who did not speak the truth; but he had only seen one of his wounds in which there was a drop of pus—one already mentioned by Mr Tait. In America antiseptic surgery had many friends in the East, but had not made much headway out West; and since the International Congress all American surgeons were waiting to see what the English surgeons would make of this question.—*Philadelphia Medical News.*

THE differences between the novelist's doctor and the doctor's doctor are usually sufficiently striking. But what shall we say of the homœopathic female novelist's female homœopathic doctor? To many of those who are reading "Doctor Zay" in *The Atlantic*, the "scientific" aspects of the story must be among its most entertaining features. Yorke, the hero, having "dislocated his ankle and concussed his brain," falls (possibly as a symptom of the latter injury) madly in love with his doctor. She, however, being already wedded to her art, and not being bigamously disposed, gives him no encouragement. But if the suitor gets only homœopathic doses of sentiment, he receives heroic ones of scientific information. The doctor's remarks always savour of the "shop," the character of the shop and the quality of its product being shown as follows. Speaking of his passion, the patient says, "'It is beyond the reach of any pellet in your little case; the remedy is not in your Materia Medica.' 'That may be true; but Nature has her own unerring prescriptions. A single dose of absence—even in the first attenuation—will work a recovery which will astonish yourself, sir.'" Again she says, "'I cannot demonstrate to you he futility of your hope. . . . Let us both consider this a case aphonia and aphasia, and be done with it.' 'Explain yourself to the ignorant, my learned physician.' 'Aphonia is inability to speak——' 'Oh, yes; my Greek might have stood me for that. And aphasia is inability to hear?' 'Precisely.' 'That is a scientific reply,' said Yorke, regarding her keenly."—*Boston Medical and Surgical Journal.*

"HORSE SENSE" IN DIAGNOSIS.—We commend the following item to such as are often unable to make a diagnosis in apparently obscure cases:—

About two miles from town he suddenly checked his horse, gazed intently on the ground, and said, "Some fellow has lost his saddle-horse here this morning."

There was no advertisement on any of the trees offering a reward for a lost horse, and as there was no lost horse in sight, we were at a loss to understand how, if a horse was lost, our friend could know so much about it.

The doctor inquired, "How do you know that a horse has been lost?"

"I see his tracks."

"Are there not hundreds of horses pasturing on the prairie, and how do you know that this is not the track of one of them?"

"Because he is shod, and the horses herding on the prairies do not wear shoes."

"How do you know that he is a saddle-horse, and lost?"

"I see a rope track alongside his trail; the horse has a saddle on, and the rope hangs from the horn of the saddle."

"But why may he not be a horse that some one has ridden over this way this morning, and why do you insist that it is lost?"

"Because if a man had been on his back he would have ridden him on a straight course; but this horse has moved from side to side of the road as he strolled along, and that is a plain sign that he grazed as he went, and that he had no rider."

"After that it would not surprise me," said the doctor, "if you were to tell us the age of the horse and the name of the owner."

"Well, that would not be very hard to do. There are signs that have told me the owner's name, and there are other signs that, if I had time to examine, would tell me his age. I know he is one of old man Pendergrast's horses. Pendergrast has a large bunch of horses down in the bottom, and an old nigger down there does all his shoeing, and shoes no other horses except his. So we know his shoe track just the same as we know his brand."

After this conviction on circumstantial evidence, it would not have seemed extraordinary if the Remnant had given us his opinion of the life and character of our great-grandmothers, drawing his conclusions from an examination of some of our physical peculiarities.

It is wonderful how expert these men become in reading what they call "signs" on the prairie or in the woods. No sign escapes their practised eye; all manner of tracks, trails, and marks are to them data on which to base conclusions. The peculiar movement of an animal will indicate the presence of some other animal in the neighbourhood. A broken limb of a tree, a crushed weed, the débris around a camp fire, the flight of a buzzard, and other such signs, are to the cow-boy and the frontiersman what the signboards and advertisements are to the people who live in cities.—*Texas Siftings.*

THE BOSTON SOCIETY FOR MEDICAL OBSERVATION

PUBLICATIONS RECEIVED.

J. H. Aveling, M.D., F[illegible]hamberlens and the Midwi[illegible] A. Churchill, Lon[illegible]

Roberts Bartholow, M.A., M.D., LL.D.,—Treatment of Diseases by the Hypodermatic Method. J. B. Lippincott & Co., Philad., 1882.

A. Hughes Bennett, M.D.,—A Practical Treatise on Electro-Diagnosis in Diseases of the Nervous System. H. K. Lewis, Lond., 1882.

John Syer Bristowe.,—A Treatise on the Theory and Practice of Medicine. Smith, Elder, & Co., Lond., 1882.

G. Graham Brown, M.D.,—Medical Diagnosis. Bell & Bradfute, Edin., 1882.

D. W. Cathell, M.D.,—The Physician Himself, and what he should add to his Scientific Acquirements. Cushings & Bailey, Baltimore, 1882.

V. Cornil,—Syphilis. Henry Kimpton, Lond., 1882.

A. Courty,—Practical Treatise on the Diseases of the Uterus, etc. J. & A. Churchill, Lond., 1882.

S. James Donaldson, M.D.,—Contributions to Practical Gynecology. Trow, New York, 1882.

Thos. W. Drinkwater, F.C.S.,—Synopsis of Chemistry. Young J. Pentland, 1882.

Louis A. Duhring, M.D.,—Practical Treatise on Diseases of the Skin. J. B. Lippincott & Co., Philad., 1882.

Dr F. Esmarch,—First Aid to the Injured. Smith, Elder, & Co., Lond., 1882.

Professor H. Haesar,—Lehrbuch der Geschichte der Medicin und der epidemischen Krankheiten. Band I.-III. Gustav Fischer, Jena, 1882.

W. A. Hardaway, M.D.,—Essentials of Vaccination. Jansen, M'Clurg, & Co., 1882.

International Encyclopædia of Surgery. Vol. II. Macmillan & Co., Lond., 1882.

Jonas Jonassen, M.D.,—Ekinokoksygdommen, belyst ved Islomdske Lægers Erfaring. Hos G. E. C. Gad, Kjobenhavn, 1882.

Journal of the Scottish Meteorological Society. Nos. 64-69. Wm. Blackwood & Sons, Edin., 1882.

A. F. A. King, M.D.,—A Manual of Obstetrics. Henry Kimpton, Loud., 1882.

Robert Kirkwood, M.D.,—Our Sanitary Laws. James Maclehose & Sons, Glasg., 1882.

D. M'Alpine, F.C.S.,—Botanical Atlas. Parts V., VI., W. & A. K. Johnston, Edinburgh, 1882.

A. Milnes Marshall, M.D.,—The Frog: an Introduction to Anatomy and Histology. Smith, Elder, & Co., Lond., 1882.

J. Mayne, M.D.,—Notes on Poisons: a Toxicological Chart. J. & A. Churchill, Lond., 1882.

Prof. F. Orsi.—Lezioni di Patologia e Terapia Speciale Medica. Fratelli Rechiedei, Milan.

Isambard Owen, M.D.,—Supplementary Catalogue of the Pathological Museum of St George's Hospital. J. & A. Churchill, Lond., 1882.

S. O. L. Potter, A.M., M.D.,—An Index of Comparative Therapeutics. Henry Kimpton, Lond., 1882.

Henry Albert Reeves, F.R.C.S. Ed.,—Human Morphology. Vol. I. Smith, Elder, & Co., Lond., 1882.

Ralph Richardson, M.D., etc.,—A Critique on the Criticisms of the Simplicity of Life. H. K. Lewis, Lond., 1882.

J. James Ridge, M.D.—Diet for the Sick. J. & A. Churchill, Lond., 1882.

Saint Thomas's Hospital Reports. Vol. XI. J. & A. Churchill, Lond., 1882.

William Stokes, Ch.M. Univ. Dub.—Address in Surgery. J. & A. Churchill, Lond., 1882.

Wm. Stokes, M.D., etc.,—The Diagnosis and Treatment of Diseases of the Chest. New Sydenham Society, Lond., 1882.

F. A. Southam, M.A.,—Regional Surgery. J. & A. Churchill, Lond., 1882.

Transactions of the American Otological Society. Vol. III. Part 1. A. Williams & Co., Boston, 1882.

Transactions of the Medical and Chirurgical Faculty of Maryland, U.S., 1882.

Tenth Annual Report of the Local Government Board, 1880-81.

D. H. Tuke, M.D., F.R.C.P.,—History of the Insane in the British Isles. Kegan, Paul, Trench, & Co., Lond., 1882.

Twenty-fourth Annual Report of the General Board of Commissioners in Lunacy for Scotland.

W. H. W. Wilkinson, L.R.C.P.E.—Some Practical Observations on Vaccination. J. & A. Churchill, Lond., 1882.

J. Burney Yeo, M.D.,—The Contagiousness of Pulmonary Consumption, and its Antiseptic Treatment. J. & A. Churchill, Lond., 1882.

THE BOSTON
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Part Fi

ORIGINAL COMMUNICATIONS.

ARTICLE I.—*History of the Chair of Midwifery and the Diseases of Women and Children in the University of Edinburgh.* An Introductory Lecture. By Professor A. R. SIMPSON, M.D., F.R.S.E., President of the Obstetrical Society, and Vice-President of the Medico-Chirurgical Society of Edinburgh.

GENTLEMEN,—Next year will see the tercentenary of our University worthily celebrated by a History of it from the lucid pen of our learned Principal. I take the opportunity of our meeting for the first time in this New Class-room to glance at the history of the Chair of Midwifery and the Diseases of Women and Children.

FOUNDATION OF THE CHAIR.

The 9th of February, 1726, is a notable day in the annals of medicine in our University. At the meeting that day of the Town Council, who were then the patrons of the University and the earnest promoters of its interests, three momentous lines of progress were opened up. Scarcely a year had passed since Monro had moved from the anatomical theatre of the Incorporation of Surgeons to the College buildings. On the day in question the patrons complied with the request of Drs Sinclair, Rutherford, Innes, and Plummer, to have the Theory and Practice of Physic and Chemistry taught in the University, and thus constituted the medical school and faculty. At that same sitting the University was for the first time authorized by the patrons to confer degrees in medicine. The third important transaction I must present to you by reading the Council minute:—

"The Council having considered the petition of Mr Joseph Gibson, chirurgeon in Edinburgh, with a declaration under the hands of four doctors of medicine, setting forth the usefulness and necessity of instituting a profession of midwifery; as also an extract of an act of the Incorporation of Chirurgeons, showing their approbation of the qualifications and capacity of Joseph Gibson, one of their number, for teaching the said art and science; they were fully convinced that it would be of great use and advantage to institute this profession, and being well satisfied with the ability and capacity of the said Joseph Gibson to discharge that office, they were of opinion that the Council should nominate and appoint him to be Professor of Midwifery in this city and privileges, with power to him to profess and teach the said art, in as large an extent as it is taught in any city or place where this profession is already instituted; and that he should be vested with the same privileges and immunities that are known to appertain to a Professor of Midwifery in any other well-regulated city or place; but that it should be expressly provided that he should have no fee or salary from this city out of its patrimony or revenue on account of his said profession. And having likewise considered that many fatal consequences have happened to women in child-birth, and to their children, through the ignorance and unskilfulness of midwives in this country and city, who enter upon that difficult sphere at their own hand, without the least trial taken of their knowledge of the principles upon which they are to practise that art, and that it would be good service done to the community to put a stop to such a practice, in order to prevent such mischiefs in time coming; they were of opinion that it should be enacted by the Council, that no person hereafter should presume to enter on the practice of midwifery within this city and privileges (except such persons who have actually been bred to chirurgery, such may practise this art, upon passing the trials that warrants their practising of any other branch of chirurgery), till once they present to the magistrates a certificate, under the hands of at least one doctor and one surgeon, who are at the time members of the College of Physicians, or Incorporation of Chirurgeons of this city, bearing that they have so much of the knowledge of the grounds and principles of this art as warrants their entering upon the practice of it; whereupon a licence should be given them, signed by four of the magistrates at least, to practise midwifery. And that the said act might the more effectually reach the valuable ends proposed by it, they were further of opinion that it should be enacted that the whole midwives who are now in the exercise of that art in this city or privileges should be obliged, betwixt and the 1st of June next, to registrate their names in a book, to be kept by the magistrates' clerk, in the Council Chamber, for that purpose; and that the new intrants be recorded in the same book; to the end it may be known who shall for the future enter upon the practice of this art without the said licence; and that the contraveners of this act should be liable in such pains and penalties as by law may or can be inflicted upon ignorant and unskilful persons for practising an art where their ignorance and want of skill may be of such dangerous consequence to the lives of so many persons; and that they should be prosecuted for such transgression by the fiscal of court at the town's expense."

This document—a monument at once to the foresight and enterprise of Mr Thomas Gibson and the Corporation of Surgeons, who conceived the idea of founding such a Chair, and to the wisdom and thrift of the Town Council, which forthwith established without endowing it,—the document gives us an insight into the conditions under which this most important addition to the University equipment was inaugurated. We can see from it that the practice of midwifery was mainly in the hands of irresponsible women. We can see, further, that these women had had no regular training, and we can easily guess how often and how grievously they must have blundered at their delicate task. But we see also that the medical practitioners were waking up to recognise that midwifery is an integral and an important part of the medical profession, and they set before themselves the double duty of giving the female midwives proper instruction, and providing for the due training of medical students in this department.

ACCOUCHEURS *versus* MIDWIVES.

What was then to be seen in the small capital of this small kingdom was at the same time to be seen in the big, wide world. Through all the lengthened ages women had had the undivided, undisputed control of the process of child-birth. Surgeons and physicians, learned with the learning of their time, were caring for all the other sores and sicknesses of humanity. But when a woman had to endure the uttermost agony to which flesh is heir, when she had to go through a process that is natural, certainly, and commonly safe, but that is sometimes dangerous as a battle-field or deadly as a plague, then she was left to the questionable care of an untrained female. Individual midwives may have gathered much experience and acquired exceptional skill, but they did not commit their knowledge to writing, or hand it on to grow and develop with the progress of the ages. What obstetric literature existed was scattered in the pages of various authors, who devoted occasional chapters to the special diseases of women, to the disorders of pregnancy, or to the management of difficult labours; but natural labour still waited scientific treatment. The most important obstetrical writings of the earlier physicians and surgeons were collected first by Caspar Wolf in 1566, and subsequently in a more complete form by Israel Spach in a volume which he published at Strasburg in 1597 under the designation *Gynæciorum*.

It was at the very commencement of that sixteenth century, in the year 1513, that the first work exclusively devoted to midwifery was published in Latin by Eucharius Rhodion. It was translated into various languages for the benefit of the midwives, who thus for the first time had something like a text-book put at their disposal. It does not appear that they were in a hurry to avail themselves of it, and we can see with what a doubtsome mind physicians set themselves to write or translate a work on midwifery, from the care with which Raynalde, for example, in his *Birthe of Mankynde* (which is really a translation of Rhodion), sets himself to meet the objections which will be made by many who "think it is not meete ne fitting such matters to be entreated of so plainly in our mother and vulgar language, to the dishonour (as they say) of womanhood and the derision of their own secrets, by the detection and discovery whereof, men it reading or hearing, shall be moved thereby, the more to abhorre and loath the company of women, every boy and knave reading them as openly as the tales of 'Robin Hood.'" But when men once began to write, when physicians and surgeons began definitely to furnish instruction for midwives, it is not difficult to comprehend how from that time there should also have begun a struggle as to whether men or women should have the supreme care of the parturient woman. Such a struggle is seen beginning already in the end of the sixteenth century, and going on until it becomes a furious fight in the end of the seventeenth and earlier half of last century. During it much was written and still more said as to the impropriety and worse of women allowing themselves to be attended in their confinements by Men-Midwives, as they were called in the vernacular, or Accoucheurs, according to the French designation. A single sentence from one of the pamphlets on that side of the question will be enough to give you an impression of their style of literature:—"The men have but lately come into fashion. In praise of Scotland and Ireland be it spoken, the women of these countries are still too modest to employ them. What is the consequence? Adulteries happen very seldom in these countries; and every farm-house swarms with strong, healthy, well-limbed children."

Ere women became familiarized with the idea of being attended by accoucheurs, such a scene as this (cited by Dr Aveling in his interesting *History of English Midwives*) from the practice of Dr Percival Willughby may often have occurred. Dr Willughby, whose daughter was an expert midwife, says:—"In Middlesex, anno 1685, my daughter, with my assistance, delivered Sir Tennebs Evank's lady of a living daughter. All the morning my daughter was much troubled, and told me that shee feared that ye birth would come by ye buttocks. About seven o'clock that night labour approached. At my daughter's request, unknown to the lady, I crept into the chamber upon my hands and knees, and returned, and it was not perceived by ye lady. My daughter followed me, and I being deceived through hast to go away, said that it was ye head, but she affirmed the contrary; however, if it should prove ye buttocks, that shee knew how to deliver her. Her husband's great Oliverian power, with some rash expressions that he uttered, flowing too unhandsomely from his mouth, dismayed my daughter. She could not be quieted until I crept privately again the second time into ye chamber, and then I found her words true. I willed her to bring down a foot, the which shee soon did, but being much disquieted with fear of ensuing danger, shee prayed mee to carry on the rest of the work."

Thus for a time the practice was partly divided between the doctors and the nurses. The books on midwifery, which at first were meant for the guidance of women, began to address themselves also to men. Thus Dionis asks and answers the question, What are the qualifications of an accoucheur? concluding his answer with the following:—"In a word, he must show himself a perfect honest man, who squares all his actions by the Word of God. He must therefore be virtuous, of a sweet temper, affable, full of compassion, and always contented with any handsome or moderate fee that is given him." Then he begins his description of the necessary qualifications of a midwife thus:—"Midwives ought not only to have all the good qualities required in men-midwives, but must also leave off several vices proper to their sex and profession."

We sometimes find the two groups of aspirants not only reading the same books, but sitting in the same class-room. Here is the account given by Mr Tolver, a London man-midwife, who visited Paris after the middle of last century, of the course of lectures given by a Mr Payen:—"This professor has rose into notice, rather through intrigue than merit, and was set up in opposition to Mr Levret. The lectures he reads were penned by a very eminent physician and man-midwife, expressly for that purpose. . . . Each course continues about three or four months; and as the expence is only one guinea, the pupils of both sexes are seldom less than threescore. Here barbers, women, and regulars promiscuously assemble, and are present together upon all occasions. A circumstance very disgusting to the gentleman, and frequently repugnant to the delicacy of a Briton."

The struggle was at its height when our far-seeing and enterprising Mr Thomas Gibson and the Corporation of Surgeons, with the aid of our wise and thrifty Provost Drummond and his town councillors, set up their Chair of Midwifery in this University. But the men were already beginning to get the best of it, and by the time the Chair got into full working order they had triumphed along all the line.

Various reasons have been adduced in explanation of the transference of obstetric practice to the male from the female sex. Three only are worthy of consideration. By some, such as Hamilton in his *History of Medicine*, it has been attributed to a caprice of fashion—an example supposed to have been first set in high circles in Paris having come to be in this, as in other matters, the *mode* for all the world. The author mainly relied on by the upholders of this theory is John Astruc, who died in 1766 in his 82nd year. This remarkable man, who practised first at Montpellier and afterwards at Paris, where he was surgeon to the king of France, was the author of many different works. His book on Venereal Diseases was long a standard work on that subject; while by pointing out the distinction between the Elohistic and Jehovistic passages in the Old Testament, he opened up a path for theologians, along which the higher critics of our day have travelled to a length that would greatly have astonished him. Among his other volumes we have a set of *Lectures on Midwifery*, which he tells us were prepared for the sages-femmes, and in which we find the following history:—

"It is certain, at least, that Maria Theresa, wife of Louis XIV., king of France, employed women only in her labours; and the example of the queen determined the conduct of the princesses and court ladies, and one after another of the ladies in the city. I have been assured that the epocha of surgeons being employed does not go farther back than the first lying-in of Madam De la Valiere in 1663. As she desired it might be kept a profound secret, she sent for Julian Clement, a surgeon of reputation. He was conducted with the greatest secrecy into an house where Madam De la Valiere was, with her face covered with a hood, and where, it is pretended, the king was concealed in the curtains of the bed. She had a good time, and was delivered at Paris, the 27th of December 1663, of a boy, who was christened Louis of Bourbon, and died the 15th of July 1668, without having been legitimated."

Fashion anywhere is powerful: Parisian fashion is proverbial. But, *secondly*, I do not doubt that Dr Aveling is nearer the mark in stating that the discovery of the midwifery forceps was a chief cause in determining the further course of midwifery practice. Up till the time that the Chamberlens invented this most valuable of our life-saving apparatus, the introduction of a doctor into a lying-in room was always an intimation to the lying-in woman that she was in the uttermost danger. The hour of her possible delivery, but her more probable death, had come. She was very likely *in articulo* before the man was summoned; or if still there was hope for her, there was none for her infant. If it was not already dead, it must now be destroyed, and she must be sorely damaged by implements of dread. But when she began to find that doctors could deliver her safely of a living child when the natural powers had failed, her terrors were allayed, and more and more she got to seek as her attendant the person on whom she could most confidently lean in all emergencies.

Thirdly, Professor Goodell points out that a yet more powerful factor in the transition was at work in the growing power of the printing-press. I have hinted already that the age-long reign of female midwifery had been barren of any literary product. Even after text-books began to be written for them by medical men, and they began to feel the pressure of competition in their profession on the part of the sterner sex, and to commit to writing something of their experience, they produced no work of enduring value or that served to further the progress of midwifery. Perhaps the most important is the book of Louise Bourgeois, *dite* Boursier, from the 1642 edition of which *The Compleat Midwife*, for a time a favourite English text-book, is largely a translation. This Louise has not wanted a genial *sacer vates* in these days, inasmuch as Professor Goodell has described her and her work in a lecture full of humour and erudition. But her work throws no new light on the process of parturition; and though in one of her chapters she describes her treatment of cases of placenta prævia as if the idea of rescuing patients by turning and extraction of the child had originated with herself, she may well have learnt it from her husband, who was a surgeon, and had for twenty years been an inmate with Ambrose Paré, who was the first to introduce into practice the operation of version. Whilst the midwives thus failed to advance with the progress of their time, the mention of the name of Paré calls up the memory of Guillemeau and Mauriceau, and a great succession of illustrious surgeons and physicians, who wrote treatises on midwifery. The enlightenment following the widened use of the press made it increasingly clear that the men who had the scientific training were the parties from whom competent text-books should proceed; and that they might fit themselves duly for such work, it became increasingly needful that they should have the opportunity of observing labour in all its conditions. As Goodell puts it, "In proportion as people grew wiser by reading books and by having them to read, the ignorance of midwives became more and more manifest. The physician developed with the times, the midwife did not. . . . The battle between knowledge and ignorance is never a drawn one; either Christian must die or Apollyon give way."

THE FIRST OBSTETRIC CHAIR.

This fight between light and darkness on the plain of Obstetrics had been going on, as we have seen, for more than a century, and the dawn was already visible, when our College and our Council concerted together to institute a chair which should help to banish the darkness and bring in the day. The more I look at the Council minute which I have read, the more I am disposed to admire the conjoint work of our two corporations. They institute a new professorship. But I am inclined to think that they also establish a precedent. They say, indeed, that the new professor is to be "vested with the same privileges and immunities that are known to appertain to a professor of midwifery in any other well-regulated city or place;" but when we look at the title-pages of the great obstetric works of the time, we do not find that any of the authors had the position of professors of midwifery. In the varies cities and universities where students or nurses were being trained, the tuition in midwifery was conducted by independent obstetricians, sometimes physicians, sometimes surgeons, or formed part of the instruction given by the incumbents of other chairs.

In London—always anomalous in its provision for medical instruction—there was room, thirteen years later, for the advent of the Scottish country doctor who migrated from Lanark to the great metropolis, and quickly gathered crowds of eager students to the lectures which he gave in his own house (perhaps in Wardour Street, Soho), with its paper lantern over the door, on which was written, "Midwifery taught here for five shillings." For though his name is almost a synonym for the glory of British midwifery, William Smellie was only a private practitioner.

In Paris his great contemporary, Levret, wrought and taught as one of the medical officers of the Hôtel Dieu, and with the title of accoucheur to the Dauphiness. Great surgeons and physicians, like Astruc, Dionis, Deleurye, might give courses of lectures on obstetrics, but a professorship of midwifery was not instituted in the University of Paris till a century after our patrons had set their chair in the University of Edinburgh.

It was fitting that Strasburg—first with the printing-press—should be first on the Continent with a professorship of midwifery, dating, according to Kilian, from 1728. The city was then on French soil, and the man who was to occupy the first distinctively obstetric chair in Germany was only born in Strasburg in May 1726, the year in which the Edinburgh chair was instituted. It was thus not till another generation that Roederer began his brilliant and too brief career in Göttingen.

If we turn to Holland, rich in universities, we note a work appearing in the beginning of last century that might almost be called epoch-making; but the author of it, Henry Deventer, was no professor. He seems to have been a general practitioner at the Hague, with a good scientific training, observant and thoughtful, pious and self-denying, and blessed withal with a helpmeet who was herself an accomplished midwife. In the universities, midwifery, as far as it was taught at all, seems to have been taken up by whatever professor had most liking for the subject as part of his course. In the University of Amsterdam it was taught one month per annum by Ruysch, Professor of Anatomy, who was famous for having collected two anatomical museums. When the first of them was bought by Peter the Great, to be carried to St Petersburg, he set himself to provide a second for his own university.

As for Belgium, Palfyn, who first gave forceps to the world, was "Demonstrateur en Chirurgie" at Ghent.

In Italy we find, from Corradi's *Obstetricia in Italia*, that Victor Amadeus II. of Piedmont started the first school for teaching in Turin in 1728, by setting apart a ward in the San Giovanni Hospital for lying-in women, where midwives should have practical instruction. At Bologna, after the model of which some of our Scottish universities were established, the first obstetrical professor was Gian-Antonio Galli, who in 1717 was appointed professor of surgery; and as he had for some time taught midwifery privately, he was nominated by Pope Benedict XIV. professor of midwifery in 1757. He was succeeded in his chair by the ill-fated Galvani, illustrious in quite other spheres than that of obstetrics.

It was therefore a bold step as well as a great one which the patrons took when, on the 9th February 1726, they instituted a profession in midwifery, and appointed Mr Joseph Gibson to be the city professor of midwifery, in this University. It was a peculiarly courageous venture in a country regarding which Bower concurs with the pamphleteer I have quoted in the statement that "the practice of midwifery in Scotland was completely engrossed by females," and in which, writing in 1817, he could add, "The profession of an accoucheur was esteemed, little more than thirty years ago, very unbecoming for a gentleman; and so strong was the current of vulgar prejudice against those who practised it, that it was only in the most extreme cases, and, in general, when they could be of little or no service, that modest women would permit them to be called in for advice or assistance."

THE FIRST PROFESSOR OF MIDWIFERY.

It would have been interesting to have known more than we do of Mr Joseph Gibson, who was probably the prime mover in the whole transaction, and who was certainly the first Professor of Midwifery in the United Kingdom, if he was not indeed the first to fill an obstetric chair in any University. The most distinct traces of him are found in the *Medical Essays and Observations* published by a Society in Edinburgh, to which he furnished three communications. In these he is described as "Mr Joseph Gibson, *surgeon at Leith, member of the Society of Chirurgeon-Apothecaries in Edinburgh, and city-professor of midwifery.*" His qualification, therefore, corresponds to that of the Fellowship of the Royal College of Surgeons, and his sphere of practice was not in this city, but in Leith, where he continued till his death in 1739, which is chronicled in the obituary of the *Scots Magazine*. According to Bower, his son had long the first business in Leith as a surgeon, and was in practice there till what he calls a recent period.

His contributions to the *Medical Essays* cannot be said to be the productions of a master mind. The most important of them discusses the question of the mode of nutrition of the fœtus in utero. Professor Monro and he have each an essay on the subject, that of Gibson having been called out by some facts which Monro had communicated to Cheselden for his work on surgery, tending to disprove the idea that the fœtus was nourished by the mouth. In Monro's reply he fairly describes the paper of the colleague whom he calls "my ingenious, valuable friend Mr Gibson," when he says, "He has given a learned critical account of the different opinions concerning the nourishment of fœtuses," and "after examining the arguments made use of for proving their nourishment to be conveyed by the navel only, he concludes them to be insufficient, and supports the doctrine of the aliment being received by both the mouth and navel." "There is no great anxiety on my part," says Monro, "to bring people, at any rate, into my way of thinking; and I dare promise on Mr Gibson's behalf that he will not value a victory in point of argument near so much as he would be satisfied to see the truth ascertained by our labours, tho' judgment should be given against him." It is to be hoped that Gibson was convinced. Certainly Monro was right. He tells how Mr Gibson, along with his colleague Dr Sinclair, helped in a mercurial injection experiment in a newly killed bitch; and Gibson, if not satisfied, is silent. His two other communications show him to be a good observer and operator, but they do not belong to the domain of obstetrics. A sentence in one of these papers, however, throws incidental light on the friendly relation in which he stood to other members of the Senatus, when he tells that he was assisted at a post-mortem examination by "Dr James Crawfurd, late Professor of Hebrew and Medicine in the University of Edinburgh, whose universal literature and consummate medical knowledge, joined to all those amiable qualifications which made up the beautiful character of a good man and sincere friend, must make all who had the happiness to know him best, to bemoan with me their own private, and regret the public loss of him."

It is of moment here, however, to note that Mr Gibson bears always the title "city-professor" or "town's professor," significant of the circumstance that, whilst the first Professor of Midwifery had a right to teach, he had no place in the Senate, and was not constituted a member of the Medical Faculty of the University.

As to who were his pupils, and where and what he taught, we have no information. We can follow him in fancy making his way up the Leith Walk, and descending the north bank of the ravine that is now spanned by the North Bridge. For that George Drummond, who did so much and so well for Edinburgh and its institutions during the seven periods in which he wore the Provost's chain, and who must have signed Mr Joseph Gibson's commission and, in so doing, cast up a highway by which midwifery might pass across the gulf of prejudice from the old world of barren routine to the new world of fruitful research,—that great provost did not commence the bridge which now joins the old town and the new till 1763. So Professor Gibson would have to find his way through the ravine, somewhere near the Physic Gardens, and up Leith Wynd, to gain the Canongate. But further we cannot trace him. It is always taken for granted that he lectured only to women; but where they gathered, and what instruction he gave, is all unknown. He died, I have said, in 1739.

As I look over the pages of the *Medical Essays* to which I have referred, I see papers by a professor of medicine in the University of St Andrews which make me wonder that a name that afterwards became famous in connexion with this Chair did not become associated with it a century sooner. This Dr Thomas Simpson, who spells his name indifferently with an *i* or a *y*, with a *p* or without it, contributes a series of essays on subjects connected with midwifery. There is one on "The Placenta, the two Cavities of the Uterus, and Ruysch's Muscles in Fundo Uteri," in which he speaks of the uterus as "that obscure though efficacious viscus," another on a "Prolapsus Pessary," another on a "Ring-Scalpel for Assisting the Delivery of Women in Childbirth," and so on, which make it clear that he would have been an able teacher of obstetrics. But he may have been already dead; or perhaps to be translated from St Andrews to Edinburgh was not deemed so desirable then as now.

THE SUCCESSIVE PROFESSORS.

Professor Gibson's successor was Mr Robert Smith. Elected on the 14th December of the same year, he received a commission which, as Bower notes, was more ample than that of his predecessor, as it constituted him a member of the Senatus Academicus. "He was consequently," says Bower, "the first who was chosen Professor of Midwifery in the city's College with power to him to profess and teach the said art in the said College, and within the city, liberties, and privileges thereof, on as large an extent as it is taught in any city or place where this profession is instituted, or as the said Joseph Gibson did profess and teach the same, and with the same privileges and immunities which the other professors in the said College do enjoy, or that are known to appertain to a professor of midwifery in any other well-regulated city or place."

This Mr Robert Smith is the haziest figure who rises on our horizon in this historic survey. Though not yet admitted as a member of the Medical Faculty, he has the full status of a member of the Senatus; and it is taken for granted that, like Professor Gibson, he duly taught midwifery to classes of nurses. But if he ever wrote anything, the product of his pen has perished with other perishable things. He did his work in troublous times. The Hanoverian dynasty was setting itself heavily and clumsily on the throne of the United Kingdom, to the great grief of Jacobite patriots; and the streets of the city were appropriated now by Highland caterans and anon by Cumberland's butchers. These were trying years for older chairs than the young obstetric institution. The attendance on anatomy once fell as low as from 150 to 76. The man must have had some good stuff in him who kept alight the torch that was put into his hand, and carried it through a tempestuous epoch on to a calmer age. Had he not fulfilled the duties of the chair to some good purpose, there would have been no chair to leave to a more fortunate successor.

After an incumbency of seventeen years, Professor Smith resigned, and on the 18th February, 1756, Dr Thomas Young was elected to the vacant chair. Here we come in sight of a more energetic personality. No history of him is given previous to his appointment to the post, but we see at once that he had a due appreciation of its duties and was prepared to fulfil them with intelligence and zeal. The only printed essay he seems to have left is his graduation thesis, of date 1776. He had been thus twenty years in the professorial chair before he took the degree of M.D., having had, like his predecessors, at the time of his appointment, simply the qualification of the College of Surgeons. In the thesis, printed, as was then the custom, in Latin, *De Lacte*, there are no observations of special value. Its chief interest lies in the collection from various sources of the cure of many different kinds of disease effected by the use of milk, so that in reading it one gets the impression that milk is the sovereign remedy for every ailment from diarrhœa to mercurio-syphilitic ulcerations. Several copies of manuscript notes of his lectures, sometimes in one, sometimes in two or three volumes, are extant. Three of these are in my possession, and they bear evidence to his wide acquaintance with the literature of his subject, and his excellent power of observation and exposition.

But the best evidence of his high capacity is found in the manner in which he used his opportunities of teaching. His successor probably exaggerates the importance of his work when he describes him as the first to teach midwives in Scotland; for there is little room to doubt that his predecessors had already, in some fashion, imparted instruction. Still Professor Young must have made some quite distinct advance on both their methods ere Professor Hamilton could say, in speaking of the lessened frequency of inversion of the uterus subsequently to labour,—"This, among many other happy consequences, has been the effect of the public instruction of midwives, a measure introduced into Scotland by the late Dr Young. Before his time any woman of intrepidity and address who chose to practise midwifery found employment; and for a while it required all his industry and professional talents to show the folly of trusting the delivery of women to such persons. Even they who pretended to the sacred name of philosophers joined in the prejudice. Dame Nature, they said, is the proper midwife, and nobody can be better qualified to attend to her dictates than Dame Ignorance. Dr Young might with great facility, by publishing a few of the horrible blunders committed by the midwives resident in Edinburgh when he began practice, recorded in his note-book (which is still in existence), have offered many most powerful arguments against such opinions, but he preferred the more philanthropic and dignified method of showing by its effects the utility of his plan. Such has been the public conviction on this subject, that in the present day there is scarcely a parish of

Scotland the midwife of which has not been regularly taught.[1] If the difficulty of instructing women to act as midwives, and Dr Young's disinterestedness in that task were universally known, a just tribute might be paid to his memory."

In one direction it is certain that Dr Young did pioneer work, seeing that he was the first to give regular courses of instruction to medical students; and the energy and enlightenment with which he set about his task is shown by the circumstance that he at once made efforts to provide for clinical instruction in midwifery. It is recorded (Bower) that, with the view of obtaining material for practical tuition, "he gave public notice that patients should be delivered at their own house free of expense, and, were it necessary, should also be supplied with proper medicines."

We find it stated, moreover, in the authorized history of the Royal Infirmary, that in the year of his appointment, "a ward in the attic story of the hospital, by the permission of the managers, but at Dr Young's expense, was fitted up for four lying-in women, or as many more as Dr Young could accommodate, each exceeding the number four paying sixpence per day to the house."

"After Dr Young had successfully taught the class for twenty-four years, he found it necessary to procure the assistance of a colleague. He therefore resigned his office upon the 25th of October, 1780, and the patrons, upon the subsequent 15th of November, elected him and Dr Alexander Hamilton conjunct professors of midwifery."—(Bower.) For three years Dr Young and Dr Hamilton worked the Chair as conjoint professors, giving alternately three courses of instruction annually to male and female pupils, till, on the death of Dr Young, Hamilton was left the sole occupant of the Chair.

This new professor, Alexander Hamilton, is the first of the Edinburgh professors of midwifery whose name is known to the outside world, so that Siebold, in his *Versuch einer Geschichte der Geburtshülfe*, begins his reference to the history of obstetrics in Edinburgh with the mention of his name as that of "an active man who has done good service for the promotion of this department." Five years before his appointment to the professorship he had published a text-book, *Elements of the Practice of Midwifery*, and at later periods more complete treatises on midwifery and the management of female complaints, which were translated into German. Besides publishing individual cases and superintending an edition of Smellie's plates, he wrote a series of letters to Dr Osborne of London, controverting the dangerous doctrines of that obstetrician, which were translated into German by C. F. Michaelis. One of Kay's portraits gives us what I do not doubt is a correct impression of this really remarkable man. Wearing the wig and shovel hat, the long coat, knee breeches and buckle shoes of the period, we see the active little man trotting along, swinging freely the dainty hands with ruffles round the wrists. He is of short stature, for he looks no taller than one of the ladies whom the artist has introduced with the projected muff and the exaggeratedly upright bearing of a pregnant female. When we look at his face more closely we are impressed with the power of the large lower jaw; and the compressed lips seem to bespeak the determined character of the man who did so much to advance the science and art of obstetrics, to promote the instruction and elevate the status of obstetricians, and to extend the reputation of the University of Edinburgh as a medical school.

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[1] In a letter to Sir Wm. Garrow, His Majesty's attorney-general, Prof. J. Hamilton says, "In no other part of Europe except Great Britain, are midwives allowed to practise without being duly instructed. In Scotland public opinion has long ago had the effect of law in this respect, and there are very few county parishes in which a regularly educated midwife is not established. Since the year 1780, above a thousand such women have been taught by the Professor of Midwifery in Edinburgh, and a great many have also been instructed at Glasgow and at Aberdeen" (P. 14).

The son of a medical practitioner at Fordoun, who had been a surgeon in the army during Queen Anne's wars, he came to Edinburgh about the year 1758 as assistant to a surgeon then in extensive practice, of the name of John Straiton, and on that gentleman's death in 1762 he became a member of the College of Surgeons, and settled in the city. The activity of his disposition may be traced in the circumstance that he had not been long a member when he was elected deacon of the Incorporation, thus becoming a member of the Town Council; and about the same time he was chosen convener of the trades. At a later period he obtained the degree in medicine of the University of St Andrews, and at a still later period he was admitted a Fellow of the Royal College of Physicians. This latter position was not obtained without a struggle, for the physicians were still disposed to look down on their brethren who engaged in the practice of midwifery, and it needed all the eloquence of Professor Gregory to persuade them to admit a group of practitioners who have since then furnished to that College a full proportion of its presidents.

In the year 1792 a *Guide for Gentlemen Studying Medicine at the University of Edinburgh, by J. Johnson, Esq.*, was published, which gave rise to fierce controversy and threatenings of legal proceedings between Professor Gregory and Professor Hamilton and his son James, the latter of whom was supposed to have written or inspired it. It was withdrawn from circulation, but a copy survives in the valuable library of the Royal Medical Society. It tells us: " Dr Hamilton divides his course into four parts. In the first he explains every circumstance in the state of women before delivery with which the practitioner ought to be acquainted; in the second he describes the treatment during child-bearing of all the various cases which can occur; in the third he describes the management of lying-in-women; and in the fourth part he exhibits a most complete view of the diseases of children in early infancy." . . . "The practice of midwifery is acquired in the lying-in ward of the Royal Infirmary; but, as it is on a very small scale (containing only six patients at a time), Dr Hamilton engages to furnish his pupils with private deliveries if they are very anxious to see much practice."

The author of this pamphlet goes on to express surprise that hitherto there has been no lying-in hospital in Edinburgh, but understands that the Professor of Midwifery is about to bring forward proposals for the foundation of such an institution.

The lying-in hospital to which the *Guide* makes reference was established in 1791 mainly through the energy and influence of Professor Hamilton, who felt the inadequacy of the limited accommodation grudgingly afforded in the Royal Infirmary. It was established under the patronage of the magistrates of the city, with the Lord Provost as president, and the Professor of Midwifery as ordinary physician. For nearly a century it has held an honourable position among the charitable and educational institutions of Edinburgh as a place of refuge and relief to multitudes of suffering women, and of instruction to many generations of nurses and students of medicine.

By the time that Professor Hamilton set himself to the establishment of this important institution, he had trained his son James, born in 1767, to be his assistant. On the 25th December, 1798, he was formally allowed by the patrons to have the assistance of his son in the chair. On the 26th March, 1800, he resigned, and on the 9th April following his son was appointed his successor. He enjoyed his retirement only for two years, dying at Blandfield House on the 23rd May, 1802, in the 64th year of his age.

The son and successor was worthy of the father and predecessor. In 1792, Professor Duncan could speak of Dr James Hamilton as "an ingenious young friend, whose industry and abilities are already so well known, and have been demonstrated on so many occasions, even at his early period of life, that his reputation can derive no addition from the mention of his name on the present occasion." He enjoyed the advantage of a very complete general and medical training, was a good classical scholar, and gave evidence of the width of his medical sympathies by publishing a translation of a volume of Morgagni's *Seats and Causes of Disease.* Midwifery, however, was his passion, for besides beginning to assist his father with his lectures when he was only twenty-one years of age, he aided him in the preparation of his various works, so that in some of the volumes we hardly know what is the father's and what the son's. His own most important production was his *Practical Observations,* published in 1836, which is referred to in the *British and Foreign Medical Review* as "a work embodying the result of an experience extending to upwards of fifty years, and comprehending a practice the most extensive, perhaps, that was ever enjoyed by any single practitioner in this department of medicine" (Vol. ix., 1840, 292).

Like his father he was a man of war, and his longest and keenest battle was for the attainment of an object which his father knew to be desirable, but deemed it hopeless to attempt to gain. It amazes us to think that there ever could have been any question as to the desirability of subjecting candidates for a qualification for practice to an examination in midwifery as well as in chemistry and anatomy, not to say medicine and surgery. Yet it was for this that the Hamiltons had to contend. In 1815 James Hamilton made his first attempt to be admitted as a member of the Medical Faculty, and not till fifteen years later was he accorded a place where common sense would have put him at the first. Long after the Professor had obtained a seat in the Faculty and had acquired a right to examine students on the subjects which he taught, he had to furnish them with a separate diploma or license in midwifery distinct from the graduation diploma. He was an enthusiast in his work, and we can believe it true what is said regarding him: "To an intimate knowledge of his subject was added an animated, agreeable, and interesting mode of imparting that knowledge to others, qualities which combined to render him perhaps the most attractive and successful professor of his day."

He died November 14th, 1839, full of years and honour; and the subject being by this time taught as a regular part of the winter course, the class was conducted for that session by his favourite pupil Dr Moir, whom three successive occupants of the chair have had the happiness to count among their choicest friends.

In setting before you such presentment as I have been able to make of these earlier Professors of Midwifery, it has needed the light of historical research to call them up from the darkness of the past, for the name even of the latest and greatest of them has fallen from the pages of our midwifery text-books, and is all unknown to modern gynecology. There remains but to mention one more name, which shines in its own light, and will be luminous for ever.

When James Hamilton was growing old, new times were passing over every sphere of thought and action, stirring every science to new research and every art to new achievement. In no department of medicine was there a more distinct transition from an old era to a new than in that which the patrons in 1840 appointed James Young Simpson to profess; and of the many men who took their part in shaping the features of the modern time no one had a larger or worthier share than he. In Midwifery good work had but recently been done, notably by Nægele and his compatriots, in developing the science. Simpson assimilated the new doctrines, and knew how to enforce, extend, and illustrate them. In all the operative procedures that the exigencies of midwifery demand he found much to improve, and on many of them he effected changes of abiding value, so that some of the most frequently employed instruments and forms of instrument are called by his name. Above all, he made the epoch memorable by robbing the lying-in room of its anguish, through the introduction, first of ether, which the surgeons were already using, and then of chloroform, the anæsthetic powers of which he was the first to prove and promulgate.

As for Gynecology, an entire transformation had to be accomplished; and this was its Augustan age. Among the many who had a hand in taking down the old and building up the new, surely it is of the man who introduced the sound, the sponge-tent, the exploring-needle, and the anæsthetic into the sphere of gynecological diagnosis, and who at the same time suggested new and fruitful modes of treating the diseased conditions then first recognised—of him, if of any, may it be said, "He found Rome brick, and he left it marble."

Were it as near the beginning of the hour as it is near the close, I might attempt to sketch for you his life and work. Enough now to say that he was born on the 7th of June 1811, and was elected to the chair on the 4th of February 1840. For thirty years he lectured with an enthusiasm the contagion of which is evidenced by the numbers of young men whom he stirred to the pursuit of his branch of study. Not only in Edinburgh, Glasgow, and Aberdeen are his pupils now teaching midwifery; but seven out of eighteen of the present professors and lecturers on the subject in England were once members of his class. He died on the 6th of May 1870, and on the 13th Edinburgh ceased her business for a time whilst she carried him to his grave in Warriston.

So much for the past of the Chair. A paragraph or two will suffice for

THE PRESENT AND THE FUTURE.

As early as 1857 tutorial instruction at the lecture hour on Saturdays began to be imparted by Simpson's private assistants. The allowance for a class tutor from the funds of the University has enabled his successor to develop the system of tutorial instruction; and with the able help of Dr Halliday Croom, Dr Berry Hart, and Dr A. H. Barbour, the classes have been so arranged that every student has now the opportunity of being drilled in the nature and use of the various obstetrical and gynecological operations and appliances.

Apart from the development of the tutorial system, two innovations of great importance have been introduced with the enlightened sanction of the University authorities. A supplementary summer course has been established, which gives opportunity for fuller technical instruction in operative midwifery and gynecology. That is the one innovation. The other is that students of this University have now provided for them the privilege of obtaining clinical instruction in the diseases of women, as an integral part of their course of clinical medicine, in the Royal Infirmary; the Professor of Midwifery and the Diseases of Women giving every sixth clinical lecture and taking, in each session, the sixth part of the bedside instruction.

What further improvement may arise in connexion with the teaching of the subjects here professed must come through the evolution of another Chair. There is already ample material to occupy the energies of two professors in the rapidly advancing Midwifery and Gynecology which are becoming more distinctly differentiated every day. Edinburgh was the school which had the honour to have the first Professor of Midwifery; let us hope that it will also have the proud pre-eminence of being among the foremost to possess a Chair of Gynecology.

One thing more and I have done. The unendowed professor has the happiness to teach a singularly well-endowed class. Two excellent ladies have each invested £1000 to found a scholarship, which may be won by competition here. My venerable friend Mrs James Buchanan, 49 Moray Place, who first endowed and afterwards furnished the "Buchanan" Ward in the Royal Infirmary, where you will receive clinical instruction in gynecology, and who, for many years past, has taken a warm interest in the patients there, is the founder of the Buchanan Scholarship. It is open to all the students of this class, and is awarded to the candidate who shows the highest proficiency in class competitions and graduation examination, and who has kept the best record of his cases in the "Buchanan" Ward. It is thus to be regarded as distinctively a scholarship in gynecology; and Mrs Buchanan has already had the satisfaction twice of greeting Buchanan scholars in the persons of Mr James Hewetson, M.B., and Mr David Smart, M.B. The James Scott Scholarship in midwifery is a witness of the filial affection of Mrs Thomson, Rosalee, a lady well known and esteemed in Hawick for her varied and virtuous activities, who founds the scholarship in memory of her father, the late James Scott, Esq., of Allanshaws. It is more distinctively a scholarship in midwifery, and will be awarded to the candidate who, besides showing general proficiency in his class competitions and graduation examination, presents the best record of the cases he has attended in his midwifery practice, and the preference will be given to those who have taken their cases in connexion with the Royal Maternity and Simpson Memorial Hospital. You will observe that when the day comes for division into two of the duties of the chair, there will thus be a scholarship appropriate for each. Meantime they are both open to the members of this one class; and my friends will be greatly disappointed if the hope of winning their scholarships do not spur you to an eager competition, following on an earnest study of the subjects for special proficiency in which they are to be awarded.

ARTICLE II.—*The Treatment of Diphtheritic Sore Throat.* By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Diseases of the Skin, Edinburgh School of Medicine.

(*Read before the Medico-Chirurgical Society of Edinburgh, November* 1, 1882.)

THERE has prevailed in Edinburgh, for a number of months, an epidemic form of sore throat which is, I believe, diphtheritic in character, though exhibiting the features of that disease under a somewhat benign aspect. The disorder is sudden in its onset, though in many cases those who have been attacked by it were more or less under the average standard of health. It was ushered in by chilliness or actual shivering, followed by fever, loss of appetite, headache, and pain in the throat, especially when swallowing. The speech was thick, and talking was evidently accomplished with difficulty. On examination, the tonsils, the arch of the fauces, and in many cases the uvula, were seen to be red and swollen; the uvula was œdematous at times. In the majority of cases a dirty gray or yellowish-gray slough was seen on one or both sides, the mucous membrane in immediate proximity being intensely red, the redness fading off by degrees till normal mucous membrane was reached. In a few, small ulcers, as if punched out, were seen on the tonsils and mucous membrane. On the tonsils there may not have been ulcers in the first instance in all cases, but rather the distended openings of the crypts; later on some degree of ulceration took place even there. But rarely there were neither sloughs nor ulcers, at least so far as could be seen, merely inflamed, œdematous, and glossy mucous membrane. The cervical and submaxillary glands, either or both, were always swollen and usually tender, and in some instances where I tested for it I found albumen in the urine. There were signs of gastric disturbance; the tongue was thickly coated with yellow fur, while there was considerable thirst and failure of appetite, and, as was to be expected, weakness and lassitude were complained of. The temperature was, in the early stages, elevated to 103°; in one case, to be further alluded to, it rose to 105°, while the pulse was correspondingly accelerated. The complaint was distinctly infectious, for wives became affected by it in succession to their husbands, and in some families nearly all the members were ill in turn. The disease had evidently no association with sewer gas; at least this could not be traced in many cases, and was only vaguely suspected as a possible cause in others. Atmospheric influences seemed a more probable factor in producing it. A gentleman and his servant alone of a considerable family were the only ones out of doors on a particular night, and both next morning were attacked by it. On the same evening another gentleman, living also at Morningside, where a number of cases almost simultaneously occurred, was out the same evening, and he also was laid up with sore throat next day. Though the disease was painful, it never, so far as my experience goes, ended fatally, or, indeed, caused any very alarming symptoms. No sequelæ of a paralytic nature succeeded it in any of my cases, yet I regard it as of a diphtheritic nature; in its essential characters, indeed, it was indistinguishable from diphtheria. The mere fact that it was not in any case fatal does not militate against this. In the analogous case of scarlet fever we encounter whole epidemics in which nearly every case is a mild one, the examples of scarlet fever at present happening in Edinburgh are such. In other epidemics there is a special tendency to the development of post-scarlatinal dropsy, in others, again, to the production of brawny induration of the neck; and still all these are rightly classed under scarlet fever, though the danger and the cause are widely different. It may serve to make the description more vivid if I cite two instances.

CASE I.—A young man, engaged in business, called on me on the 27th September, complaining of pain in his throat and feeling very unwell. He had been working rather long hours at business, and, in consequence of some repairs which were going on at home, which had led to the rest of his family residing for the time out of town, he had been scarcely so well dieted as usual. His food had been too uniform from day to day, and he had perhaps hurried over his meals. At least he admitted he had not felt quite so well for a short time—was, in fact, overworked. He looked ill; his temperature at 9 A.M. was 102°, and his pulse 120. The arch of the fauces, the tonsils, and uvula were red and swollen. The uvula was œdematous. Several small ulcers bearing yellowish-gray sloughs were seen on the right side of the throat. He was at once sent home and to bed, and was directed to paint his throat with a *saturated* solution of boro-glyceride in glycerine frequently during the day. When seen in the evening his temperature was 105°, and his throat much the same as it was in the morning. He was now directed to take 10 grains of salicylate of soda in an acetate of ammonia mixture every two hours. Next morning the pulse was still quickened, but the temperature had fallen to 98°. He felt easier; there was some degree of inflammation in the throat, and the ulcers were visible, though smaller and cleaner. These were quite gone and he was out on the 2nd October. In this case the effect of the treatment when adopted at the commencement of the ailment was seen; in the following, its influence after the disease had lasted some time was no less apparent.

CASE II.—A railway pointsman was in his usual health till the 28th September. On that day he felt pain in his throat and difficulty in swallowing, but persevered at work till 1st October, when, though he went out in the morning, he was compelled to return home and take to bed. His throat became steadily worse, but I did not see him till the 11th, in the evening. There was little if any fever then, but the right side of the arch of the fauces, extending well up into the roof of the mouth, was red and swollen out into a glossy hemispherical prominence, which seemed to fluctuate on palpation. Pain shot up into the right ear. He could scarcely swallow, had no inclination for food, nor was he even very thirsty. I ordered his throat to be painted frequently during the night with the boro-glyceride solution, and 10 grains of salicylate of soda to be taken, well diluted, every two hours. The pain increased till about 4 A.M. on the 12th, when, after the throat had been painted for the second time and he had his second dose of the salicylate (for it was nearly midnight ere he got the medicines), he fell soundly asleep, and awoke free from pain and able to take a good breakfast. On the 13th there was little redness or swelling remaining, and he went out for a walk. In this instance there were the symptoms of threatening suppuration, shown by the pain shooting into the ear and sensation of fluctuation; but I both questioned him closely and carefully examined his throat, and there was neither the history nor the appearance in the throat of an abscess having burst. I think, therefore, we may fairly ascribe the relief he experienced to the treatment employed, an opinion which he expressed most decidedly.

Previous to adopting the treatment indicated I had employed gargles of permanganate of potass, and chlorate of potass internally, aided by the inhalation of steam charged with the permanganate of potass, but the results were not so satisfactory as I could wish. Some time before the value of salicylate of soda in inflamed throat was alluded to in the medical papers, my friend Dr A. J. Duncan of Dundee had, in a letter received from him, mentioned that he had found it most useful in causing the resolution of the dangerous cynanche of scarlet fever. I therefore tried it in the epidemic sore throat under consideration, and found that it certainly lessened the inflammation and removed the fever with nearly the same rapidity as it lowers the temperature and removes the pains in acute rheumatism. But, used alone, the same thing was apt to happen as so often in rheumatism under the treatment by the salicylate; the disease recurred on exposure to cold, or even on return to ordinary duties, and in some instances ran on to suppuration. About this time an article appeared in the *Scotsman* on the preservation of meat, in which an account of M. Barff's boro-glyceride was given. I thought this would be worth trying as an adjunct to the salicylate; and having found from Messrs Duncan & Flockhart that it was soluble in glycerine, I tried it. The results of this combined treatment have been highly satisfactory. The saturated solution of boro-glyceride in glycerine causes no pain when painted on the inflamed, ulcerated, or sloughy mucous membrane, but its use is immediately followed by relief to the symptoms. The disease, however, causes blood-poisoning, evidenced by the fever and the albuminuria, and against this the salicylate of soda acts energetically, as has been seen in the recorded cases, which are but examples of what occurred in many others. With this treatment there have been no recurrences, no formation of abscesses; recovery has in all been rapid and satisfactory. In conclusion, may I recommend a trial of the boro-glyceride in glycerine in ulcers of the mucous surfaces, as of the cervix uteri. The treatment has another advantage over any form of gargle, that by painting the inflamed surface we keep it at rest, instead of, as in the act of gargling, causing painful and injurious movement by the unavoidable contraction of the muscles of the palate and pharynx. In the case of children, even, little difficulty was experienced when they found not pain, but comfort, followed its use.

ARTICLE III.—*Note of a somewhat Unusual and Complicated Case of Inguinal Hernia.* By JOSEPH BELL, F.R.C.S. Ed., Surgeon to the Royal Infirmary.

(Read before the Medico-Chirurgical Society of Edinburgh, November 1, 1882.)

A. B., æt. 26, policeman, was admitted to my ward, at request of Dr Thatcher, on Thursday, Oct. 5th, at 10 P.M., with the following history:—

The patient, a powerful, active, and very muscular policeman, was on his holiday, and, amusing himself by leaping over a bar, on coming down discovered that he had strained himself, and found a painful, very tense tumour, as large as a large orange, but ovoid and flattened, in his left groin. This happened about 7 P.M., and was at once followed by urgent vomiting, intense pain at umbilicus, and great prostration. He was seen soon after this by Dr Thatcher, who, after a short attempt at reduction, recognising the gravity of the case, was kind enough to send him in under my care. My house-surgeon, Dr Blaikie, attempted the taxis, but gently, and, seeing it was of no avail, sent for me at once, and I arrived about 10.30, or within *four hours* of the occurrence, the first occurrence of the hernia. Dr Blaikie noticed that there was only one testicle present in the scrotum, and on inquiry was told that the other had never been down, but could be felt at times in the groin.

Having given chloroform and shaved the parts, I made a free incision along the long axis of the tumour, and found an exceedingly thin, transparent sac, tensely filled, and containing a teaspoonful of transparent serum. On opening the sac at its upper surface, about 18 inches of bowel were seen, of a very dark colour, and full of serum, but retaining lustre, polish, and tension. In addition to this, a large piece of omentum was also in the sac, swollen, engorged, but non-adherent, lying like an apron over the upper half of the coil; and behind the bowel was the testicle, small in size, not larger than a small walnut. The cord was also exceedingly thick, and full of serum.

The external inguinal ring was fairly open and easily dilatable, not requiring division; and at first it seemed as if the bowel was to be easily emptied and returned into the abdomen, as with gentle pressure nearly the whole coil at once retired from view. It was obvious, however, that it was not relieved, and that it only was returned into a largely dilated and broad inguinal canal; so I again pulled the coil fairly out, making traction on its neck, which was very tightly held. I then raised the piece of omentum, which unfolded to quite the size of the palm of the hand, and, gently pulling upon it, found that it was also tightly held, and at the constriction was already black in colour and apparently dead. Pulling the testicle also down, we found the cord also held as in a vice. The constricting point was the internal ring; and the canal being of its full normal length, this could barely be reached by the tip of my forefinger, and the tip could not be got through it.

With care, however, I guided a long, curved, probe-pointed bistoury on the point of my finger, and with great caution nicked the ring upwards till the finger could be got through it, and then, feeling no pulsation, and guiding the knife, divided it freely. This being safely accomplished, it was then easy enough to empty the bowel of flatus and gradually reduce the coils into the abdomen. The question then arose what to do with the omentum. It was difficult to believe that such a large piece could have been driven at once through such a small aperture; but there it was, and the constriction was so tight that it was almost certain to die, or at least to suppurate. So, deciding on cutting it off, I ligatured it with thick catgut in four positions, and divided each separately, leaving the catgut ends long, to act as a drain. I then pulled the testicle and cord as far down as possible into the scrotum, and, leaving the catgut hanging out, stitched up the deep parts first, and then the edges, with strong catgut, and dressed the wound with gauze and carbolized wool.

The patient was kept under opium for first few days, and on milk diet. Neither pulse nor temperature ever rose. His bowels were opened with enemata on sixth and eighth days, and the cure has been most complete. Not a drop of pus formed.

The points of interest this case has to practical surgeons are,—

1. The large size of hernial contents when compared with the unusually small opening in internal ring.
2. The dilated canal and external ring by presence of testicle.
3. The rapid injury to omentum, and risk to life of bowel, after only *three and a half hours'* strangulation.

ARTICLE IV.—*The Examination of Deaf-Mutes.* By Dr KIRK DUNCANSON, Lecturer on Diseases of the Ear, School of Medicine, Edinburgh.

(*Continued from page* 423.)

No.	Name and Birthplace.	Age.	Cause.		Condition			Hearing Power.		Family History and General Observations.
			Congenital.	Acquired.	Of the Drumhead, E.M.A., and Auricle, etc.	Of the Nose.	Of the Pharynx.	Bone Conduction.	Aerial Conduction.	
38.	J. A., Fife.	13	Cong.		Wax in both, most in R. M.Ts. look pretty normal but small. Aur., mast., E.M.A., normal.	Normal.	Normal.	Hears W. and vib. T.-F. from teeth and bones in L. only.	Vib. T.-F. in left only; hears voice low note in both ears, left much the best; does not hear high note.	Brothers and sisters D.-Ms.
39.	G. M'L., Ross & Cromarty	8	Cong.		M.Ts. normal-looking, most so in left. Short process prominent; opaque. Aurs. small, prominent.	Post-nasal catarrh.	Normal.	W. and vib. T.-F. from teeth and bones.	Hears low note shouted in R.	Rather a dull boy.
40.	J. R., Glasgow.	9		Acquired.	M.Ts. very normal-looking, deep. Triangular reflex broken.	Naso-pharyngeal catarrh. R. tonsil large.		Hears vib. T.-F. best in R. from teeth and bones.	Hears both high and low notes in R.	Lost his hearing from scarlet fever when eighteen months old. One brother D.-M.
41.	J. L., Kincardineshire.	10	Cong.		M.Ts. normal. Manubrial and peripheral vessels congested. Short process and handle prominent. Aur. large, prominent.	Normal.	Normal.	W. and vib. T.-F. from teeth and bones.	W. and vib. T.-F. well heard in front and in mouth. Hears voice very well.	Teeth rather wide, peggy. Nasal bones flattened.
42.	A. S., Midlothian.	12	Cong.		M.Ts. deep, moist, good colour. Shrapnell's pouches full. Aurs. prominent.	Normal.	Normal.	Hears vib. T.-F. best in R., a little in L.	Hears vib. T.-F. 3 in. in front of R., 1 in. in front of L. Says *ah* after Mr L. Hears voice high and low note in both ears, R. best.	One sister D.-M.
43.	J. W., Perthshire.	10	Cong.		Wax in both. M.Ts. deep, dull, opaque.	Normal.	Normal.	Hears W. and vib. T.-F. best in R. from teeth and bones.	Voice low note shouted, best in L., went into his stomach.	One brother and one sister D.-Ms.
44.	A. L., Clackmannanshire.	9	Cong.		M.Ts. deep, dull, lustre and transparency good.	Normal.	Normal.	Hears W. and vib. T.-F. in both from teeth and bones.	Hears voice low note in R.	Paralysis of right hand. Nervous.

45.	A. C., Forfarshire.	10	Cong.		M.Ts. deep, dull, lustreless, fibrous-looking. Aur., mast., and E.M.A. normal. Tymp. small, contracted.	Normal.	Normal.	W. and vib. T.-F. on teeth and bones.	W. and vib. T.-F. close in front of meat., W. = $\frac{C+}{30}$. Heard high shouting in R.	
46.	J. A., Dundee.	10	Cong.		M.Ts. deep, dull, lustreless. Shrapnell's pouches bulging. Aur. small, finely marked.	Normal.	Normal.	W. and vib. T.-F. fr. bones and teeth.	Hears low note shouted in R	Father and mother deaf-mutes, also three brothers and one sister.
47.	J. M., Inverness.	12	Cong.		M.Ts. more normal-looking as regards size and markings; chalky deposit in posterior central part of R. Aurs. large, prominent. Mast. norm. Wax in left E.A.M. R. Norm.	Normal.	Normal.	Hears W. and vib. T.-F. very distinctly in both.	Hears W. $\frac{2}{30}$ in both. Vib. T-F. at 6 ft. distance in R. when sounding on table. In left at 4 in. before wax was removed.	Can speak very well. Says "The Lord's Prayer" very distinctly. Does not catch up the labials nor linguals very well, b and s. Has heard a little since birth.
48.	A. B., Arbroath.	12	Cong.		M.Ts. dull, deep, lustreless. Shrapnell's pouches full. Tymp. shallow.	Catarrhal.	Catarrhal. R. tonsil soft, large.	W. on mastoid only. Vib. T.-F. on teeth and bones.	Hears low note, shouted in both alike. Vib. T.-F. in front of both.	
49.	G. M., Ross-shire.	12		Acquired disease at four years.	M.Ts. deep, dull, lustreless. Shrapnell's pouches bulging.	Normal.	Normal.	Hears vib. T.-F. from bones and teeth in R. only.	Hears medium note shouted in R. only.	Father fisherman. Does not speak. He never spoke.
50.	D. M., Sutherlandshire.	13	Cong.		Wax in both meat. M.Ts. deep, vascular injection. Markings more distinct.	Normal.	Normal.	Feels vibrating T.-F. on teeth.	Heard a low note shouted in R. Follows vowels and words by his hand on Mr L.'s larynx. Is being taught speech.	One brother and one sister D.-Ms. If you fix his eyes upon one object you can touch him; or if you call him to run towards you, one of his comrades can easily place himself in front of him, and he rolls over him. Has a sister with same affection of eyes (retinitis pigmentosa).
51.	P. S., Carlisle.	13	Cong.		M.Ts. deep, more normal-looking, much driven in. Promontory seen. E.A.M. moist, healthy.	Normal.	Normal.	Hears vib. T.-F. in teeth and on bones in R.	Vib. T.-F. in front of R. Heard a deep, low sound of voice in front of R.	An uncle on the maternal side a D.-M. Speaks a little; would not venture to say "thirteen."
52.	J. M'L. Greenock.	13	Con.?	Relatives say acquired.	M.Ts. deep, lustreless.	Normal.	Normal.	Vib. T.-F. from nose, teeth, and vertex.	Hears a low, deep note shouted with both ears. The low notes best in L.	Parents say his deafness arose from disease, but can give no age. He is subject to attacks of *petit mal*. Speaks well.
53.	W. P., Lanarkshire.	14	Cong.		M.Ts. deep, more normal-looking, lustreless. Tymp. shallow. Tragus notched on both sides.	Normal.	Normal.	Vib. T.-F. in R. from teeth, nose, and vertex.	Hears both high and low notes, shouted, in both. Does not distinguish ā, ē, ī, etc.	Two sisters D.-Ms. Three cousins, one paternal, two maternal, and paternal grandfather D.-Ms. Speaks *very* well.

THE BOSTON SOCIETY FOR MEDICAL OBSERVATION

EXAMINATION OF DEAF-MUTES.—*Continued.*

No.	Name and Birthplace.	Age.	Cause.		Condition			Hearing power.		Family History and General Observations.
			Con-genital.	Acquired.	Of the Drumhead, E.M.A., and Auricle, etc.	Of the Nose.	Of the Pharynx.	Bone Conduction.	Aerial Conduction.	
54.	R. S., Fife.	10	Cong.		M.Ts. deep, dull, lustreless.	Normal.	Normal.	Hears vib. T.-F. best in R. W. in mouth between teeth in R.	Hears low, deep note shouted in R. Vib. T.-F. in front, best in L.	One brother D.-M.
55.	J. T., Perthshire.	10		Acquired.	Wax in R., small quantity in L. M.Ts. very deep, cupped, fibrous-looking.	Normal.	Normal.	Vib. T.-F. in L. from teeth, nose, vertex.	Heard vib. T.-F. in front of R. after syringing. Hears low note shouted in L.	Had inflammation of the brain when three months old. Used to pass urine involuntarily during sleep.
56.	A. M., Lanarkshire.	10	Cong.		Wax in both, hard plug in R. M.Ts. very normal-looking, especially right.	Normal.	Uvula pendulous.	Very doubtful.	Says he hears loud shouting.	One brother and one sister D.-Ms.
57.	J. R., Lanarkshire.	11	Cong.		M.Ts. dull, deep, opaque.	Normal.	Normal.	W. and vib. T.-F. on teeth and bones of head.	Hears low note shouted in both very well, also W. $\frac{C}{80}$ and vib. T.-F.	Some history of deafness in his relations, but cannot be ascertained.
58.	J. S., Fife.	12	Cong.		M.Ts. white, dull, deep, opaque.	Catarrhal.	Catarrhal.	W. and vib. T.-F best in L. from teeth and bones.	Vib. T.-F. Mi_3 4 in. in front of R., 5 in. in front of L. Hears voice pretty well in both. Speaks and reads lips well.	Is an only child. Has heard shouting in ears always. Strumous. Eye-sight defective.
59.	D. L., Forfarshire.	12	Cong.		M.Ts. perforated; left meat. swollen; otorrhœa.	Normal.	Normal.	W. and vib. T.-F. on bones and teeth, best in L.	Vib. T.-F. 8 in. in front of L. Hears voice loud in L.; always heard a little in L.	Has an aunt D.-M. on father's side. Learns lip-reading. Speaks well. A peculiar flat face. Teeth peggy. A dull boy.
60.	A. C., Fife.	13	Cong.		M.Ts. dull, white, glistening, too deep.	Catarrh.	Catarrh.	Feels vibrating T.-F. on bones, not in ears.	Hears a sharp, high note shouted in R.	Two brothers D.-Ms. One dead. Cystic tumour of R. upper eyelid.
61.	R. S., Dumbartonshire.	10	Cong.		Wax in left meat. M.Ts. dull, deep, white, opaque.	Normal.	Normal.	Vib. T.-F. from teeth and bones well in both.	Vib. T. F., close in front of both; did not hear shouting.	One sister D.-M.
62.	D. H., Fife.	14		Acquired.	Malleus handle very prominent in R.M.T., not so much in L. M.Ts. deep, dull, grayish colour.	Catarrh.	Uvula very pendulous.	Feels vib. T.-F. Ut_3 only, not in ears.	Does not hear shouting.	Lost hearing from typhoid fever when seven years old. Speaks very intelligently and well, but nasal. Breathes by mouth

63.	H. G., Edinburgh.	12		Acquired.	Wax in both. R.M.T. cicatricial, thick, white; none of the usual markings. L.M.T. almost entirely gone. Rim deep. Formerly discharge from both.	Normal.	Normal.	Vib. T.-F. on nose and teeth in R.	Hears medium note shouted in R.	A rather delicate boy. Lost his hearing from scarlet fever at five years of age. Chronic ophthalmia tarsi. Stylicidium of R.
64.	J. R., Falkirk.	10	Cong.		R.M.T. only a rim left, chiefly above. Large perforation in antero-inferior segment of left. Discharge from both tympanic cavities. Both Eustachian tubes pervious to water from E.A.M.	Normal.	Normal.	Vib. T.-F. from bones, nose, and teeth.	Hears low note shouted in both.	Bandy legs. Waxy, doll-looking face.
65.	A. L., Midlothian.	13		Acquired.	M.Ts. dull, opaque, deep.	Catarrh.	Catarrh; left tonsil enlarged.	Vib. T.-F. in both ears from bones, nose, teeth.	Vib. T.-F. in front of concha, best in R. Hears loud voice in both.	Lost his hearing from disease when two years of age.
66.	R. B., Midlothian.	11		Acquired.	Shrapnell's pouches full, bulging. M.Ts. driven in.	Normal.	Normal.	Vib. T.-F. from teeth and mastoid.	Hears voice shouted close to his R. ear.	Lost his hearing from disease when eight months old.
67.	W. S., Linlithgowshire.	11		Acquired.	M.Ts. well marked. Bones too prominent, and pouches deep, and colour good in front.	Normal.	Normal.	Feels vib. T.-F. from teeth, nose, forehead, and mast., and thinks he hears it in R. ear.	Vib. T.-F. Ut$_3$ close into concha in R. and in mouth.	A very deaf boy. Lost hearing from fever at six months old.
68.	W. W., Clackmannanshire.	14		Acquired.	R.M.T. deep, dull; normal markings. Wax around plug of cotton-wool in L., E.A.M. Ulcer on lower segment of L., M.T.	Normal.	Normal.	Vib. T.-F. from teeth, nose, vertex, and mast. in both, best in R. W. in R. between teeth.	Does not hear shouted voice.	Lost hearing from a fall when four years of age. Reads Mr L's lips and repeats. Says "Thank you, sir" distinctly.
69.	D. N., Ross-shire.	14	Cong.		M.Ts., normal markings, only small and atrophic-looking.	Normal.	Normal.	W. $\frac{P.+}{30}$ and vib. T.-F. fr. bones in R. only.	Hears low note shouted in R. best.	Learns to speak. Said "Thank you" distinctly.
70.	J. B., Perthshire.	13	Cong.		M.Ts. dry, deep, contracted; normal markings. No vibrations. Meats. dry.	Normal.	Normal.	Vib. T.-F. Ut$_3$ from bones in R. only.	Does not hear voice at all.	
71.	A. P., Newcastle.	13		Acq.?	M.Ts., normal markings, dry, deep, opaque. No vibrations.	Normal.	Normal.	W. and vib. T.-F. from teeth, nose, vertex, and mast. in both.	W. $\frac{2}{30}$ in both. Vib. T.-F. Ut$_3$ four in. in front of both. Hears voice very well.	Father and mother D.-Ms. Two brothers and two sisters D.Ms. One sister hearing. Has ticking noise in L. ear when head is on pillow on that side. Speaks very well. Says "Thank you" very distinctly. Lost hearing fr. teething at eight months.
72.	C. H., Lerwick.	14	Cong.		M.Ts. deep, opaque, dry. Normal markings, small.	Normal.	Normal.	W. from teeth in R., not in L. Vib. T.-F. best in R. from bones.	Vib. T.-F. in R. close in front. Hears shrill, high note screamed in R.	

ARTICLE V.—*Notes on the Recent Epidemic of Measles in Iceland.* By CHARLES E. PATERSON, Student of Medicine, Edinburgh.

IN Britain, epidemics of measles occur with such frequency and are so widespread that it is rather the exception than otherwise for any one to attain adult life without having suffered from the ailment. But such an epidemic, occurring in an island whose population numbers some 70,000, and which, therefore, affords an ample field for observation, while its isolated position has secured its immunity from the disease for upwards of thirty-five years, can hardly fail to present some features of interest; and it is in the hope that some such point may have been touched upon that the following brief notes on the recent epidemic of measles in Iceland have been collected.

Previous to 1882 there had been no general epidemic of measles in Iceland since 1846, thirty-six years ago. A few cases, indeed, occurred in 1869 in the north and east parts of the island, but the disease did not then spread to any extent. Thus a whole generation had grown up without any experience of the disease, which, introduced into Reykjavik, in the south-west, early in May last, spread thence over the whole country during June and July, and was still lingering in one or two spots on the east and north coasts in August and even in September.

The disease was introduced into Iceland on this occasion on 2nd May 1882, by an Icelander, Helgi Helgasson, who arrived in Reykjavik from Copenhagen on that date. He must have acquired the infection in Copenhagen, whence he had sailed on 15th April. He had been ill on board the mail steamer for about a week before reaching Reykjavik, but merely supposed that he was suffering from cold. On landing, he was still in the stage of febrile commotion (stadium prodromorum), but was able to go about; the eruption appeared on the night of the 3rd May, and he and his family were then interned, imperfectly, however, for about ten days. The individuals next affected were his wife, four children, and maid-servant, who all became sick on the 9th or 10th May, the eruption appearing on them on the 12th. A student who was in Helgasson's house on the 2nd May, was taken ill on the 13th. The two men-servants of the apothecary, who came in contact with Helgasson on the 3rd May, and were exposed to no other source of infection, turned ill on 14th May. On 14th and 15th May, several other persons, the date of whose infection could not be so readily fixed, were taken ill. A little girl was playing with Helgasson's children on 2nd and 3rd May; she carried the infection to a young woman who lived in another house and had no intercourse with Helgasson's household, and who became ill on the 18th May. About the 22nd, the pupils in the Latin School began to take the disease, after which it spread rapidly, and to such an extent that in the end of June

1100 out of a population of 2700 (in Reykjavik) were ill, and six to eight deaths occurred daily. In the beginning of July the epidemic was almost over in Reykjavik, but the disease was rapidly extending everywhere throughout the country.

No special irregularities or departures from the common type of measles were noted.

The chief complications were capillary bronchitis and catarrhal pneumonia (bilateral), never croupous pneumonia. These were the commonest causes of death. Less serious sequelæ were, severe catarrh of pharynx, larynx, and bronchi, epistaxis, and catarrh of the conjunctivæ. Whooping-cough did not occur as a sequel. (An epidemic of whooping-cough had occurred in Reykjavik about twelve months ago. May this not account for its non-appearance after the measles ?)

The deaths in Reykjavik, out of a population of 2700, were about 150.

The best recoveries were among children from four to twelve or thirteen years old. Among older patients, those under twenty made the best recovery, those above twenty suffered to a greater degree in more or less direct proportion to age, and the few persons over thirty-six years who had escaped the epidemic of 1846 and were now taken ill suffered severely, as a rule.

Most of the above information was kindly furnished to me by Dr Hallgrimsson, acting senior physician in Reykjavik during the epidemic. Dr Gudmundsson, who is physician for a large district on the south coast, stated that in his part of the country, out of a population of 6000 or 7000, he only knew of two or three individuals who did not take measles. In his own house, the first to be taken ill was one of his servants, and all the rest of the household were attacked ten days later. In pregnant women the disease was very serious, and abortion frequently followed. He observed one case, however, of a woman in the ninth month of pregnancy, where abortion did not follow the attack of measles. Dr Gudmundsson noted the occurrence of the "smell of measles," having observed a peculiar smell emanating from the patients at the commencement of and during the eruption, resembling that felt during the plucking of geese, but quite a smell *sui generis*, "not very strong, but rather disagreeable."

The spread of the epidemic was no doubt accelerated by a number of favouring circumstances; the spring and summer were cold and wet; the disease reached the island at the time when the country people were beginning to make their annual journeys to the trading stations, and when, therefore, infection was most readily conveyed from one place to another; and the fishing stations on the coast were crowded with fishermen, among whom, sleeping while on shore in every spot where shelter was to be had, the infection would spread with the utmost rapidity.

The mortality, which in Reykjavik was about 5·5 per cent. of the population, would seem, from statements made to me at some of the trading stations on the east, north, and west coasts, to have been slightly higher in other parts of the country. The cold and damp character of the summer, caused by the unusual and protracted visit of the Polar ice to the north and east coasts, would naturally heighten the mortality, which must also have been increased in some measure by culpable negligence on the part of the patients and their friends. The factor at a large and important trading station on the south coast informed me that people came from the country round about to transact business with him while the measles exanthema was actually present on them! Little wonder that, as he said, "they went home and died."

ARTICLE VI.—*A Case of Brain Tumour.* By J. CARLYLE JOHNSTONE, M.B., Senior Assistant Physician, Royal Edinburgh Asylum.

MRS W., æt. 50, widow, small shopkeeper, admitted into Royal Edinburgh Asylum April 2, 1882.

The *history* obtained was meagre and unsatisfactory. She appears to have been a sober, hard-working woman, burdened with the cares of widowhood and a family, and of late vexed with business anxieties. There was an hereditary predisposition to insanity, an aunt having been insane; and it is stated that patient's mother died "from rupture of a bloodvessel in the brain," while her father's death is attributed to white swelling of the knee. Until two years ago she had good health, and then she had a "fit," the nature and details of which are not forthcoming. About twelve months afterwards, signs of mental aberration were observed. She became depressed in spirits, took strange fancies, and suffered from sleeplessness and giddiness. Two months before her admission she had a "shock," and her "face was twisted." Since then her speech has been affected, and motility generally has been impaired, while there has been a steadily increasing confusion of mind, with an almost constant feeling of giddiness. She exhibits delusions which are indicative of a painful sense of physical instability and mental uncertainty. She is continually seeing "holes in the floor," and she mistakes the actions of persons about her, fearing vaguely that they are going to injure her.

Present Condition.—She is a well-nourished woman, with a round, moon-like face, a blank, foolish expression, thin brown hair, and gray eyes. There is general impairment of muscular power, the lower limbs being chiefly affected. She cannot stand erect, though she can move her legs about in bed. The grasp of both hands is feeble. The paresis does not appear to affect the limbs of one side more than the other. The right side of the face is flatter than the left, and responds less readily to the expression of the emotions; the right angle of the mouth droops slightly. The tongue is tremulous and unsteady, has a beef-steak appearance, and can be protruded only a little beyond the incisors. Articulation is faltering and laboured, and there is a degree of immobility about the lips. There is distinct difficulty of swallowing, and occasionally a spasmodic choking sound in the throat is heard. A want of co-ordination is observable in the movements of the limbs, with general restlessness of the muscles. Sense of touch, sensibility to pain, and cutaneous reflex excitability are good. The pupils are equal, and react sluggishly to light. There is evidently an impairment of vision, but hearing is acute, and the other special senses do not appear to be defective. Percussion and auscultation of the lungs give normal results, but frequently a sighing respiration is remarked. The cardiac sounds are faint and obscure, area normal; pulse, 92, very compressible. Temperature, 97°·2. Appetite good. Bowels constipated.

The intellectual faculties are greatly obscured, memory is very defective, and the healthy control of the emotions is greatly impaired, as shown by the readiness with which the patient can be made to laugh or weep. When left to herself she chatters away in a subdued tone of voice. When she is addressed her face assumes a slightly perplexed look, and she usually either makes no reply or utters some irrelevant expression. Her almost only rational utterances are brief ones, such as "yes" and "no," and the naming of things. When she attempts to give a lengthened reply to a question, she has a difficulty in finding the right words, and puts in wrong ones, repeats words which have just been uttered in her hearing, but which have no bearing on the subject, soon forgets what she is talking about, and relapses into incoherent nonsense. She recognises the right word at once when it is suggested to her, and has no difficulty in repeating it. She recognises and names correctly any things that are shown her. Such of her statements as are intelligible reveal absurd and illogical delusions. Thus when asked where she is now, she answers calmly, "In hell." She says that her son has been sent to hell, and then she weeps. She says that she is 24 years of age, that she was 53 "when she came in," that she is now 44, etc.

Progress of Case.—April 5.—Since her admission she has had plenty sleep, has taken her meals heartily, and has been free from any active excitement or intractability. She is, however, very restless, tumbling about in bed, and fumbling stupidly with her clothing. The mental obscurity is less marked, and the aphasic phenomena are not so striking. She understands what is said to her, but, owing to her greatly impaired power of attention and her forgetfulness, her replies are often very irrelevant, and she has a trick of catching up words uttered in her hearing and introducing them into her remarks in an absurd manner. The difficulty of articulation is very distinct. Swallowing, also, is performed with great difficulty, and is frequently accompanied by an alarming choking sound. She suffers from constipation, but the bowels are kept open without any difficulty; otherwise no special treatment is being adopted. The temperature is normal, and pulse varies from 90 to 100.

April 22.—Since last report there has been a great improvement in the symptoms. She has gained considerably both in intellectual activity and muscular power. There is greater freedom of speech and a more rational use of words. She is tolerably cheerful, takes a mild interest in her surroundings, is grateful for attentions, and keeps her emotions more properly under control. She can sit erect, can use her hands and arms to greater purpose, has a more lively expression of face, and shows less general incoordination of movement. Deglutition is much less difficult. She suffers at times from headache, which does not appear to be severe, and is not referred to any particular region of the head. A feeling of giddiness is always present. Frequently there is intense flushing of the face, which is very transient, and is not accompanied by any general increase of temperature. Vision is uncertain, objects appearing to swim before her eyes when she looks at them fixedly, but hearing is not defective. Ordered thirty grains of bromide of potassium three times daily.

May 15.—During the last three weeks patient's condition has steadily improved in nearly every particular. The mental obscuration and weakness are not more marked than they would be in any case of convalescence from a severe illness. She takes an interest in what passes around her, behaves in a cheerful and sensible way, and converses intelligently. Beyond a slight quaver or falter in the articulation, no aphasic signs are perceptible. The impairment of deglutition is very slight. She rests well at night, rises nearly every day, and can walk about a quarter of a mile without assistance. Her gait is slow and unsteady. She frequently tries to do a little house work, but she is unable to sew or knit owing to her uncertainty of vision and a still existing want of precision of movement. The defect of sight also prevents her from reading. At times she spends a day in bed, complaining of weakness, headache, and giddiness, and there is then some confusion of mind, while the flushing of the face and scalp, though not so intense as formerly, is usually remarked.

June 3.—This pronounced improvement continued until a few days ago, when a sudden and decided change for the worse set in, marked by great confusion of mind and impairment of muscular power. She now lies tumbling about restlessly and stupidly, and fumbles with the bedclothes; her face and scalp are intensely flushed; her expression is blurred and foolish; she takes no interest in anything that occurs near her; she does not clearly understand anything that is said to her, and replies to questions in an irrelevant and incoherent manner, while at other times she mutters to herself unintelligibly. Temp. 98°; pulse 84.

June 18.—Since last note there has been a steadily increasing impairment of the mental and physical powers. For the most part she has been too stupid to take notice of anything, but at times her mind has been a little clearer, and she has been able to give brief answers to inquiries as to her state of health. Frequent intense flushing of the face and scalp has been present. Deglutition has been very defective. There have been changes in the respiratory rhythm, with sighing respirations. Optical illusions have been remarked, as indicated by her greeting strangers as old friends. The pulse and temperature have been little affected. Sugar is present in the urine. For some days she has been in an almost unconscious state, has swallowed only a little milk, and has passed all her evacuations in bed. Between three and four o'clock this afternoon she was reported as having had a severe epileptic fit, the convulsions being general, and affecting both sides equally. When seen by the writer a few minutes afterwards, her face was of a deep purple hue, the veins of the head and neck were swollen, the breathing was greatly embarrassed, and her mouth was full of glairy mucus, which she had no power to expel. She had bitten her tongue. She regained consciousness slightly, and breathed more freely, but at ten o'clock she had another but slighter convulsive seizure.

She gradually sank, and died at 3.25 A.M. on the 19th June.

Autopsy thirty-three hours after Death.—Body fairly well nourished.

Cranium.—Skull-cap symmetrical; some hyperæmia of bones. Dura mater injected. Pia mater and arachnoid somewhat thick; strip readily from the brain matter. The surface of the hemispheres presents a dry and glazed appearance, the convolutions being flattened and compressed, and the sulci nearly obliterated. Large black veins run along the lines of several of the larger sulci. The basal arteries and their branches, as far as they can be traced, are free from disease. The infundibulum forms a prominent projection, being buoyed up by fluid. Section of the hemispheres displays an abnormally large number of visible vessel points, with enlargement of the perivascular canals, while the cortical matter is thinner than usual. The lateral ventricles are considerably distended with clear fluid, as are also the third ventricle and the *iter a tertio ad quartum ventriculum.* The floor of the lateral ventricles is finely granular. At the anterior part of the left caudate nucleus there is a shallow depression admitting the point of the little finger, but otherwise the basal ganglia are free from gross lesion. On raising the lobes of the cerebellum and cutting through the arachnoid screen, a tumour is discovered occupying the entire cavity of the fourth ventricle. This tumour is ovoid in shape, and lies obliquely on the floor of the ventricle, a slight annular constriction dividing it into an anterior and right lobe and a posterior and left one. About two-thirds of its substance are to the left of the middle line. It measures about 1½ inch in length, from ¾ to 1 inch in width, and ¾ inch in depth. It is of a soft, brain-like consistence and grayish colour, and several small vessels can be traced on its surface and entering its substance. From its position it has evidently acted as an obstruction to the passage of the cerebro-spinal fluid from the third to the fourth ventricle, and has interfered with the return of the blood through the straight sinus. The tumour apparently arises from the floor of the ventricle, from which it can be readily detached, leaving an eroded surface. Its attachment extends over the whole of the left half of the floor anterior to the transverse striæ, and encroaches slightly on the right half of the floor, while posteriorly it passes slightly beyond the left striæ, only a small area at the origin of the fibres being uninvolved.

Microscopic sections show the growth to be composed of a fibroid corpusculated meshwork, the openings of which contain collections of cells of very various sizes and shapes, the predominating forms being columnar and pyramidal. Spindle cells are abundantly present in the stroma, in which numerous bloodvessels ramify. In many places columnar cells are paved side by side along branching lines, and form finger-like processes.

Beyond a slight expansion of the floor of the fourth ventricle, there is nothing remarkable in the appearance of the pons, medulla, or cerebellum.

The optic nerves are normal in appearance, and the other cranial nerves do not appear to be diseased in any way. The encephalon weighs 46¾ ounces.

Thorax.—Heart—Right cavities full of black liquid blood and soft black clots; left cavities have similar contents, but less in quantity. *Lungs*—Lower lobes engorged with black blood.

Abdomen.—Liver and *spleen* slightly congested. Left *kidney* contains two cysts. Urine shows traces of albumen and a considerable quantity of sugar.

Commentary.—In addition to the general symptoms of an intracranial growth which were present in this case, there are several other points of interest which seem worthy of remark. The peculiar position of the tumour was indicated in a striking way by many of the symptoms, the most important of which may be here recapitulated. Of those "centres" which are situated in the medulla oblongata, there was distinct implication of the respiratory with its neighbouring convulsive centre, as indicated by the peculiar sighing respiration, the convulsive seizures, and the manner of death; the vaso-motor centre, as shown by the flushing of the face and scalp; the diabetic centre; and the centre for deglutition. To these phenomena must be added the disorders of articulation, motor coordination and vision, the paresis of the extremities, the psychical disturbances, and the headache and giddiness. As is usual in cases of tumours which have their seat in this region, there was a degree of hydrocephalus internus, due to the pressure of the growth on the veins and its obstruction to the return of the cerebro-spinal fluid into the subarachnoid space. (See cases by Dr Moxon, *Lancet*, 2nd April 1881; and Dr Bastian, *Lancet*, 19th and 26th June 1880.) To this obstruction the psychical disorder may in part be attributed, and in part to the increased intracranial pressure exerted by the tumour itself.

The most interesting feature in the case is the remarkable remission in the symptoms. (See somewhat similar case by Dr Burney Yeo, *Brain*, vol. i. p. 273.) Intermissions in the symptoms of brain tumours have frequently been observed in the early stages of the disease, and have been ascribed to alterations in the bulk of the tumour, subsidence of œdema or inflammation of the neighbouring tissues, accommodation of surrounding parts, etc., but it is difficult to understand how, in the advanced stage which the disease must have reached in the present instance, such a decided rally could have occurred. It is possible that there was a slight shifting of the position of the tumour, causing it temporarily to cease to act as an obstruction to the passage of the cerebro-spinal fluid.

Owing to the imperfect history, it is impossible to say much as to the causation of the tumour, but it will be seen that hereditarily there was a predisposition to nervous disease.

ARTICLE VII.—*Shearing or Moulding of the Fœtal Head, in its Medico-Legal Aspects.* By W. J. SIMPSON, M.D., Aberdeen.

SHEARING or moulding of the head of the newly-born child is a subject which has only of late years been carefully investigated, and has not yet been applied to medicine further than helping the obstetrician to gain some valuable hints in regard to deformed pelves. It will therefore be useful briefly to draw attention to the fact that shearing can also be applied by the medical jurist to help him in certain cases.

It is unnecessary to enter into all the details of moulding. A few plates taken from Budin's monograph will sufficiently illustrate the substance of my remarks.

The ordinary character of the fœtal head while in the uterus, as ascertained by Cæsarean section and quick podalic delivery, is known to be ovoid (Plate I., Figs. 1 and 3), the two sides to be perfectly symmetrical (Plate I., Fig. 2), and the contour or outline of the head to be quite even. As a rule, in breech presentations, the head being a very short time in the pelvis, and hence not subjected to any lengthened pressure, the form changes very little, if at all, from the original shape; so that, in cases of primiparæ, if a full-sized mature child was seen soon after its birth, and the head retained the rounded and symmetrical form, there could be no hesitation in concluding there had not been a cephalic presentation. On the other hand, in head presentations, from the delay of the head in the pelvis and the consequent strong pressure it is exposed to, certain of its bones overlap others, and a lateral moulding takes place which imparts to the head an asymmetrical form (Plate I., Fig. 5). The ovoid or nearly rounded form is lost (Plate I., Fig. 6), and the head is considerably changed in shape longitudinally, whereby the maximum diameter is increased and the suboccipito-bregmatic lessened (Plate I., Fig. 4). Thus it is the obstetrician can, after the birth, by the study of the child's head, assert not only that the head was born first, but also the position it occupied in the pelvis, and whether there had or had not been undue difficulty in labour.

In face presentations there is a similar asymmetrical outline in the transverse diameter, but the other changes are quite distinct and diagnostic. The vault is flattened, the occiput bulges out considerably, the occipito-mental diameter is increased, and the suboccipito-bregmatic lessened (Plate II., Figs. 1 and 2). These changes in shape of the head are due to alterations in the relation of the bones to one another, and are therefore additional to what may be produced by the ordinary caput succedaneum, which may or may not be present.

With reference to the caput succedaneum, it is an important consideration, as Olshausen points out, that the tumour, from its serous composition, becomes, some time after death, diffused over a larger area than it originally occupied, and may also become displaced by gravitation; so that dependence on the position of the caput succedaneum alone is not reliable and may mislead the after-diagnosis.

The changes here alluded to are in the configuration of the head, produced by the shifting of the bones of the skull one upon another, the alteration in the shape of the bones, and the form of the sutures and fontanelles.

When the three varieties of form are put together and compared, as in Plate II., Fig. 3, there is seen to be a striking contrast, and one sufficiently characteristic to enable a medical man who has not seen the labour, but who is thoroughly acquainted with these changes, to form an opinion as to how the child was born. Fortunately the deviations are somewhat lasting, and hence afford valuable information in forensic cases. Of course, in narrow-brimmed and deformed pelves the deviations from the original shape are much greater; but these have no particular interest from a medico-legal point of view, for it is not usually labours that require skilled aid which give rise to legal proceedings. Now, the ability to say in a law court what was the presentation may be of importance in

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Plate 1.

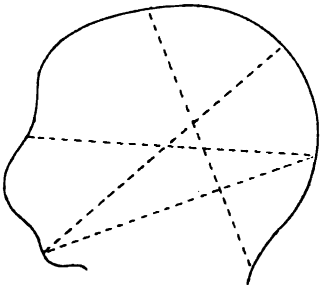

Fig. 1

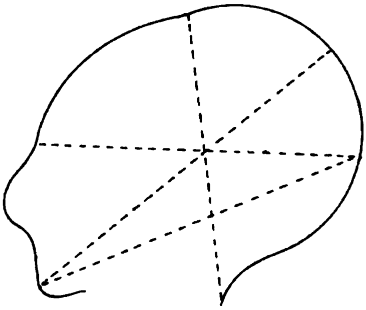

Fig. 4

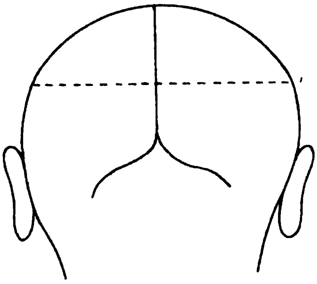

Fig. 2.

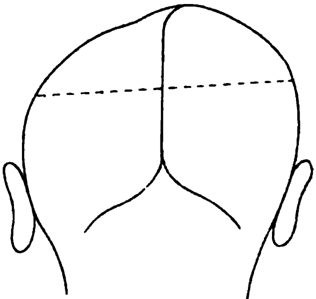

Fig. 5.

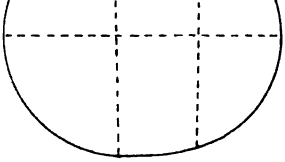

Fig. 3.

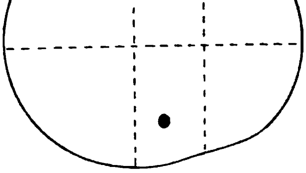

Fig. 6.

J. Bartholomew Eng'

Plate II.

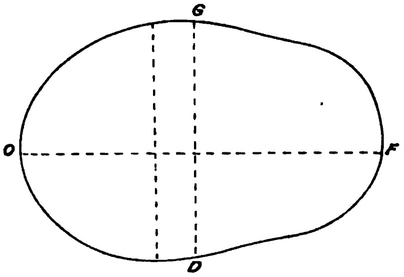

Fig. 1.

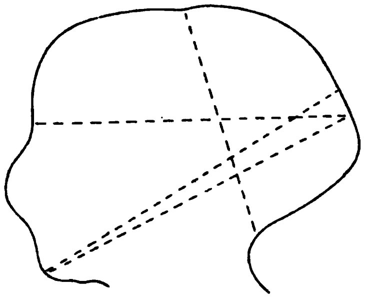

Fig. 2.

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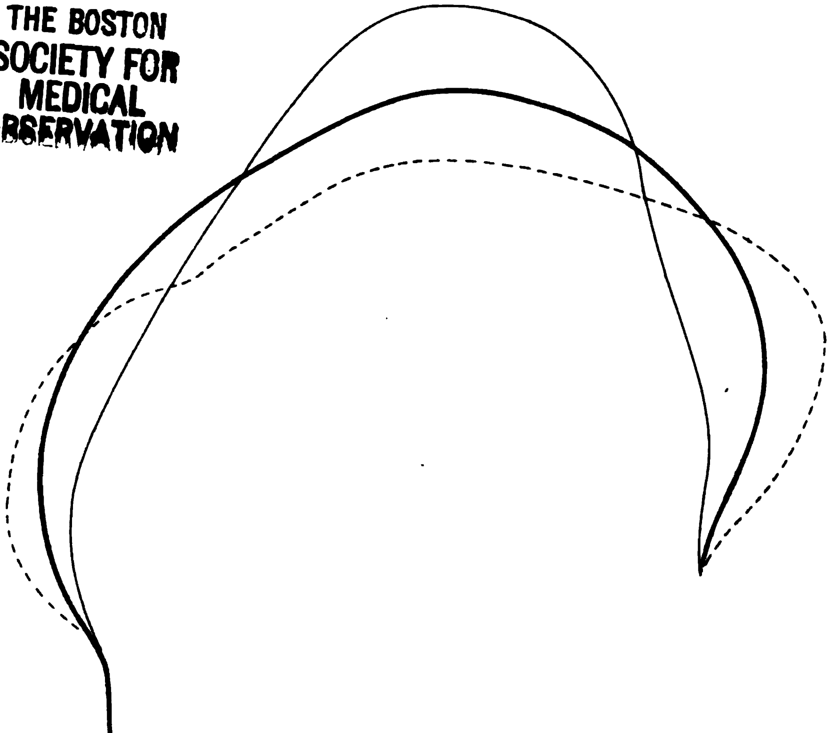

Fig. 3.

J. Bartholomew, Edin^{r}

corroborating or refuting the statement of the accused. If it is stated in her defence that the delivery of the child was feet first, then the medical man may be called upon to say whether this was so or not. In a case of alleged child-murder (*Irvine's Justiciary Reports*, vol. ii., M'Allum, Jean) the medical man was asked if he could tell, from examination of the child, what part of it was born first. The reply was, "I can't tell," which was candid enough, certainly, and wisely given, since the observed facts did not justify a better; but if the appearances of the head had been accurately examined in relation to the preceding facts as to the varieties of form the head undergoes in different kinds of labour, a different answer, and one more helpful to the court, might have been given. There would have been no difficulty in answering what part of the child came first.

It may be, as it has been on former occasions, a question whether a mark on the head was produced during the birth or afterwards by violence. The power to diagnose the kind of birth might help to show that injury of this particular kind was not possible during the birth. A defence often brought forward is that the delivery was a very rapid one, too rapid to allow the woman to obtain assistance or even get ready the necessary arrangements to keep the child alive. The condition of the head might determine the point, and would either render the statement probable or not. It might be shown the labour was the reverse of rapid.

It is evident, then, that the condition of the head is an important medico-legal point. It furnishes additional facts to aid in forming a correct opinion on the many and difficult points which arise in cases of infanticide. Hitherto, in the numerous cases that have occurred, the moulding of the head has not been mentioned in the medical reports, nor has any reference been made to it by medico-legal authors in their works. A minute description of the lungs, and their aptitude to sink or float in water, and the condition of the other internal organs, are given in most medical reports on newly-born children; but proof of air in the lungs does not go far with either judge or jury if other questions of a collateral nature cannot be answered. It is important, then, to have facts which will answer some of these collateral questions, and I therefore submit—

I. That in the configuration of the fœtal head certain information may be gained concerning the labour, which may be useful in confirming or refuting the statements of the accused, and in enabling the medical jurist to arrive at an opinion as to the probable cause of death, where the lung has been partially expanded.

II. That no medical report on a newly-born child is complete which does not state the external form and appearances of the head, with special bearing on the mouldings it has undergone during the labour.

ARTICLE VIII.—*Surgery Past and Present.* Being an Introductory Lecture delivered at the Commencement of the Session 1882–83 to the Class of Surgery at Minto House Medical School. By CHARLES WATSON MACGILLIVRAY, M.D., F.R.C.S.E., Assistant Surgeon, Royal Infirmary, Edinburgh.

WE have met together to-day, gentlemen, to commence the study of surgery, and the first question you may very naturally expect me to answer is, "What is surgery?" That apparently simple question is very much more difficult to answer than you would suppose. It would be very much more easy to say what surgery is not than shortly to define what it is. Some cynics have briefly defined this science, in opposition to medicine, as being those maladies which are external and curable, while the latter comprises those that are internal and incurable. Some have even gone further, and have divided surgery into two classes of cases, those that are curable and those that are remunerative.

But, seriously speaking, we must acknowledge that there is no hard and fast rule whereby we can separate surgery from medicine. The best we can do is to say, in the words of Mr Lawrence, that surgery, in its common acceptation, includes—1st, Injuries of all kinds; 2nd, The greater part of external and local complaints; 3rd, Most of such internal affections as produce changes recognisable externally—for example, alterations of figure, colour, or consistence; 4th, All cases requiring external topical treatment, operations, or manual proceedings of any kind. Such general definitions, however, suggest at once numerous exceptions. Skin diseases are external affections, but still many of them clearly pertain to medicine. Ascites or fluid in the cavity of the belly is an internal disease productive of a change of figure, and often requiring an operation, but is usually regarded as medical. Pleurisy may require a blister, which is external topical treatment, but still no one could call it a surgical malady. One could give numerous other examples, but to what good? It is better at once to confess that the distinction is in many cases purely arbitrary, depending more on use and wont than on any scientific principle.

Having thus briefly, and I fear very incompletely, defined what it is that we propose to study together during this session, I think it is well, before entering upon the details of the surgery of the present, that I should devote the remainder of the hour to giving you a *résumé* of the history of surgery in the past.

The commencement of surgery, gentlemen, as indeed of medicine in all its branches, is lost in the darkness of antiquity. Even in the very earliest times rude attempts at surgical treatment were made, such as the removal of foreign bodies, the arrest of hæmorrhage, or the replacing of fractured or dislocated bones in their normal positions; and one is not surprised to find, that then even as now among savage nations and illiterate people, the religious element was largely mixed up with all forms of medical and surgical treatment, and that these to be of service, were associated with incantations, sacrifices, or magic in some shape or form. Indeed, the healing craft was supposed to be the direct gift of the gods, and to have been transmitted by them to priests or holy men as their representatives on earth.

We find this particularly well marked among the Egyptians, whose hieroglyphics, whether painted on walls of temples, carved on stones, or preserved on the rolls of papyrus, form the earliest historical data we possess.

From these we learn that medical science was at that time to a large extent in the hands of the priests; and of the forty-two so-called holy books which have come down to us, we find that the last six are devoted to medicine, and treat of general and special diseases and their treatment, and of anatomy, surgery, and surgical instruments. But besides the priests, who attended to the civil population, there were others, who after a regular training in the religious schools, acted as military surgeons and followed the armies in time of war. To give you an idea of the antiquity of these writings, I may mention that one of the best known, which bears the title of "Directions for the Preparation of Medicines for all Parts of the Human Body," states that it was written during the reign of Amenophis the First; and as he lived in the seventeenth century before the Christian era, it must be about 3500 years old. Some parts, however, belong to a much earlier date, taking us back for about 4600 years.

It consists principally of short descriptions of diseases and their remedies, especially diseases of the eye, and in the part devoted to surgery treats, among other things, of ulcers, diseases of bones, and fractures. Their knowledge seems to have been almost entirely empirical; and considering their slight acquaintance with anatomy, it is remarkable to what an extent they developed operative surgery. There is no doubt that they practised the operation for cataract, as well as cupping, venesection, amputation, and castration, the latter operation being then and for long after almost a speciality, eunuchs, even in later days, principally coming from Egypt. The surgical instruments which have come down to us, and may now be seen in museums of antiquities, fill us with astonishment by their variety and complicated character. With such proofs of high development in medical science, one is not surprised that their pre-eminence was acknowledged by other nations; and we thus find that even in the time of Homer, the Greeks regarded Egypt as a magical country, each of its inhabitants as a doctor.

A distinction between surgeons and physicians does not seem to have existed, the chief specialists being those who devoted their attention to diseases of the eye, a fact which need not surprise us, considering to what an extent ophthalmia prevails in Egypt even at the present time.

The other nation of great antiquity which participated with Egypt in medical learning was India. At what period the manuscripts were written which have come down to us is by no means certain, some apparently dating from the fifteenth century before the Christian era, others being evidently much later, and showing proofs of the influence of Grecian learning.

In the books of the Veda, which are among the earliest of the manuscripts which we possess, we find their views of medicine largely mixed with superstition, diseases being ascribed to the influence of evil, recovery to that of good, spirits,—incantations, prayers, and sacrifices being the methods of cure.

Priests, as in Egypt, devoted themselves to medicine, having assistants of a lower caste to perform the minor surgical operations.

At a later period we find a wonderfully high state of development. There were regular schools of medicine, with practical classes. Operations were performed on the cadaver and on animals; but a practical knowledge of anatomy seems to have been wanting, and this is the more remarkable considering the high standard to which surgery had attained. There was an army medical service, regular field hospitals in time of war, and in their writings we find full directions for the arrest of hæmorrhage, the methods of operating, and the dressing of wounds. The surgical instruments they employed were numerous and varied. Crepitus is mentioned as a symptom in fractures, and these injuries and dislocations were treated by means of extension, counter-extension, and splints. We even find the magnet recommended for the extraction of small metallic foreign bodies; while hernia and aneurism are described. Tumours were extirpated, and their malignancy spoken of. Abdominal section, suture of the intestines, lithotomy, and the operation for cataract were practised. Plastic operations on the face, especially the restoration of the nose, have from time immemorial been common in India, the fact that ablation of this organ has at all times been a common form of punishment naturally led to this result.

Both medicine and surgery reached at a very early period a high state of development among the Greeks. From the Homeric poems we find that a knowledge of surgery was possessed by many of the warriors, and mention is made of the dressing of wounds, the extraction of foreign bodies, and the arrest of hæmorrhage. Æsculapius was undoubtedly the father of Greek medicine and surgery; as the reputed son of Apollo, he was regarded as of divine origin, and numerous temples were raised to his honour, to which crowds of sufferers flocked for relief; but, besides the priests who therein served, there were the Æsculapians, a distinct class of physicians who followed the tenets of their great master, and were bound by an oath only to transmit the traditions of their art to their successors. Besides these regular physicians were various specialists, especially lithotomists: these were officially recognised, the Æsculapians being bound not to attempt this branch of surgery.

Although there appear to have been regular hospitals for the reception of the sick, many of the profession lived wandering lives, passing from place to place in the exercise of their art. There were also the so-called gymnasts, the forerunners of the modern bone-setters, who taught gymnastic exercises, and specially devoted themselves to the treatment of fractures and dislocations.

Besides these we find mention made of regular military surgeons, who possessed a literature of their own; and those who wished to become distinguished in surgery are, in the writings of Hippocrates, recommended to devote themselves to this branch of the profession.

It was during the fifth century before the Christian era that this, the greatest of the Greek physicians, practised, and it is from his writings that we obtain the largest amount of information as to early Grecian medical literature. The books which bear his name seem many to be original; others are compilations from the writings of others. By him our art was for the first time treated scientifically, and his writings must be regarded as the foundation of all later medical literature. A considerable portion of them is devoted to surgery, the best known being those treating of diseases and injuries of bones and joints, injuries of the head, the treatment of wounds, and diseases of the rectum.

Operative surgery had attained a high degree of development in his times, clear and accurate descriptions being given of the operations of trephining, paracentesis, and for empyema and fistula. The want of definite anatomical knowledge and of sure means for the arrest of hæmorrhage interfered greatly with the development of amputation. Only when a limb became gangrenous—of which affection a clear and accurate description is given—is an ablation of the dead part recommended. Ophthalmic surgery, especially the treatment of external affections, is clearly and accurately described.

As a later and important branch of Greek surgery must be mentioned the Alexandrian school; where anatomy was for the first time systematically studied, and medical science divided into the subdivisions of dietetics, medicine, and surgery. Much real advance does not seem to have been made, philosophical systems having taken the place of accurate and original investigations.

The healing art did not make much progress in Rome until the later days of the republic, Grecian slaves being the first to introduce the knowledge of their fatherland. These were associated with barbers and professional bathers, and thus the medical status remained at a low ebb. Asklepiades was the first who, through his knowledge of Grecian medicine, occupied a position of any eminence. He did not devote himself to any extent to surgery, the introduction of the operation of tracheotomy being the only improvement with which his name is associated.

It was not until the Christian era that medicine and surgery made any considerable advance in Italy. The writings of Hippocrates and the Alexandrians were indeed studied, but little original work was done, most of the writings of this period being merely compilations of what was already known. About this time, however, one of the greatest of the Roman medical writers appeared, Celsus by name. Eight books of his great work *De Artibus* bear the title *De Medicina*, and of these the seventh and eighth are devoted to surgery. He it was who introduced the use of the ligature for the arrest of hæmorrhage, a discovery which, curiously enough, fell almost entirely into abeyance until again revived by Ambroise Paré in the sixteenth century. A hundred years later Galen, one of the most prolific writers of his time, came to Rome from Pergamos, in Asia Minor, and seems at once to have gained a high position. Although, apparently, well versed in surgery, he did not devote himself specially to it, his attention, as the manner of that time was, being more taken up with vague philosophical systems of medicine. He lectured on surgery in his younger days, and taught anatomy, the dead bodies of apes being used for dissection, he also wrote a commentary on the surgical works of Hippocrates, and a manual of bandaging.

A very brilliant period of operative surgery was from the second to the fourth century, in the days of Archigenes, Heliodoros, Antyllos, and others. Few, however, of their writings have survived, what we know of them being from the allusions of later authors. For nearly a thousand years little was done in the way of improvement, and the history of our art, with a few exceptions, may be said to be almost a blank.

The so-called Byzantine period not only marked the decay of Roman power, but also of scientific advancement. Oribasios, Ætios, and Paulus of Ægina are almost the only surgeons whose names are worthy of mention. During this period the social position and academic training of medical men advanced considerably, many scientific institutions being founded, in which medicine formed a special branch of study.

Pausing for a moment to take a brief survey over the progress of surgery during antiquity, we find that in many respects vast improvements had taken place. The instruments found in Pompeii show a wonderfully high degree of development. There are knives and scissors, bronze catheters, specula, and forceps, very similar to those now in use, venesection, arteriotomy, and cupping were practised, hæmorrhage was arrested by means of styptics, the actual cautery, ligature, and torsion. The treatment of wounds, fractures, and dislocations does not seem, however, to have advanced much since the times of Hippocrates and the Alexandrian school, trephining was much practised, laryngotomy, introduced by Asklepiades, was carefully described by Paulus of Ægina. Heliodoros has given us the most complete work on hernia, and is the first to recommend operative interference, astringent applications and trusses having been the only methods of treatment formerly employed.

The Alexandrian school improved the operation of lithotomy; the Byzantine recommended lithotrity, though what their special method was is unknown. Paulus wrote on affections of the genitals, and refers to different forms of chancres, though whether syphilitic or not is difficult to say. Heliodoros treated strictures of the urethra by internal division and the use of bougies. Celsus describes tumours, simple and malignant, and recommends their extirpation. Rufos was the first to treat aneurism by means of the ligature. Antyllos, however, is best known by his writings on this subject, though he also accurately describes plastic operations and the resection of different bones. Different methods of amputation are treated of by Celsus and Archigenes.

For long medical education was a matter of private instruction, but gradually various schools were founded, those of Greece, Alexandria, Marseilles, and Rome being the most renowned.

We now come, gentlemen, to the darkest period of the history of our art, that of the Middle Ages. With the fall of the Roman Empire all scientific studies declined, and, among others, medicine, and especially surgery, ceased to make any marked progress; indeed, up to the commencement of the sixteenth century there is little of interest to be told. As a result of the Mahometan conquests in the south and east of Europe, Oriental learning gradually superseded that of the Roman Empire, and thus the Arabian school of medicine was founded. This school flourished in Spain during the tenth century, and with it are associated the names of Albucasis, Rhazes, Avicenna, and others; their writings are for the most part compilations, and in surgery little advance was made. They invented a large number of complicated and useless surgical instruments, and largely employed the actual cautery, not only for the arrest of hæmorrhage, but also for the treatment of many other affections, as diseases of joints and the radical cure of hernia

Among other European nations, especially those of Teutonic origin, medicine and surgery remained for long in a very primitive condition. During the Middle Ages not only were the priests medical men, but even priestesses exercised the healing art, thus being the forerunners of that more modern innovation, lady doctors; their methods of cure were for the most part incantations and magical drinks. Royalty, also, was supposed to possess miraculous power of healing, the remnants of which superstition remained until a much later period, some of our own kings being held to have the power of curing certain maladies by a touch.

In Italy and France some attempt was being made to raise medicine into a science, though much ability was wasted in vague theorizing and useless philosophical systems. Surgery, on the other hand, had gradually become degraded into a mere handicraft, being left almost entirely in the hands of barbers, specialists, mountebanks, and public executioners. Numerous universities were founded, the most famous being those of Salerno, Bologna, Lucca, and Paris; and though theoretical surgery was indeed a branch of study, to put the knowledge thus acquired into practice was regarded as degrading. Various religious sects also practised medicine, especially the Benedictines, but they too neglected surgery, the Council of Tours, in the twelfth century, having prohibited the clergy from undertaking any bloody operation. About this time Guy de Chauliac and Bruno compiled systems of surgery. Mundanus of Lucca attempted to revive the study of anatomy in the commencement of the fourteenth century by practising and teaching dissection of the human body, but little real increase of knowledge resulted. Rolando wrote on the treatment of wounds. William of Salicetto strove to reunite medicine and surgery, and is the first in the thirteenth century to give us a definite account of venereal affections.

About this time, however, a great advance was made by the establishment of the surgical college of St Come in Paris, the members .of which constituted themselves into a board of examiners. This institution was established by the higher class of surgeons in opposition to the medical faculty, and in order to distinguish themselves from the guild of barbers and bathers, who had the right to practise such minor surgery as cupping, venesection, and the treatment of fractures and dislocations. And thus, then as now, arose petty squabbles; the University taking up the members of the latter guild, and, by giving them a higher education, attempted to set them in opposition to the College of Surgeons. The college, notwithstanding, greatly flourished for nearly five centuries, until in 1719 it became incorporated with the Academy of Surgery. The most distinguished of its earlier members were Lanfranci, who instituted clinical teaching and operated before his pupils, and Henri de Monteville, who taught anatomy.

The first English surgeon of any note, John Arden by name, acquired his education about this time at the University of Montpellier, and such of his writings as have come down to us give proof of those same qualities which have ever distinguished British surgery, being eminently practical, and dealing with facts acquired from personal observation.

In Italy during the fifteenth century was established a sect of operators, the Calabrians by name, descendants of ancient Greek colonists, who, following the custom of their forefathers the Empirics, devoted themselves to those operations which, on account of their dangerous character and other circumstances, were avoided by regular practitioners. They seem to have been wandering specialists, who performed lithotomy, operated for the radical cure of hernia and cataract, and undertook the treatment of strictures.

They also largely practised plastic operations, though it was not until a century later that Tagliacozzi gave his name to that plastic operation on the nose, otherwise known as the Italian method. It is well to mention that, though apparently not much practised, the ligature of arteries still finds a place in the literature of this time, and it is more than interesting to learn that anæsthetic inhalations were used by surgeons of the thirteenth century, sponges soaked in the juices of mandragora and henbane being employed for this purpose. Local anæsthetics were mentioned at a much earlier period by Pliny, but both equally seem to have been abandoned and forgotten.

With the sixteenth century a new era in surgery and medicine, as well as in all other arts and sciences, began. During this *Renaissance* period the influence of the Reformation and the invention of printing led men gradually to forsake a blind following of philosophical systems handed down to them from their forefathers, and to betake themselves to personal observation and criticism. Professors of surgery and anatomy were appointed in the universities, and the latter subject especially became elevated into a science. I have only to mention the familiar names of Vesal, Fallopia, and Eustachio, to show you what an immense stride anatomy made at this period.

The discovery, a little later, by Harvey of the circulation of the blood, and by Aselli of the lymphatics, completely overturned the older theories, and from this time we may date the advance of modern anatomy and physiology. The spread of syphilis about this period extended the surgeon's sphere of usefulness, and the introduction of firearms in warfare led to a scientific study of the treatment of such wounds. These were at first regarded as poisonous, and were treated accordingly by the application of boiling oil and caustics; and though we find various surgeons casting doubt upon this view, still it was not until the time of Ambroise Paré that this error was finally disposed of. This greatest surgeon of his time, who must be regarded as the father of modern surgery, began life as a barber's assistant, but by his great natural ability, both as an operative and scientific observer, he gradually rose into eminence, being first admitted as a member of the College of St Come, and finally becoming the surgeon in ordinary to several of the kings of France. To him we owe the reintroduction of the use of the ligature, as well as a rational method of treating wounds. At the same time Pere Franco introduced the operation for strangulated hernia, and improved the methods for the radical cure of this affection, he also is known as being the discoverer of the supra-pubic operation of lithotomy. Primary amputation also began to be practised, and rude forms of tourniquets came into use.

During the seventeenth century surgery gradually advanced, but more slowly than during the time of Ambroise Paré. This may be explained by the attention of scientific men being directed more to the newly discovered sciences of physiology and microscopical anatomy, the labours of Malpighi greatly contributing to this result. Great operative experience was obtained during the Continental wars of this period, and the development of the College of St Come into the School of Surgery led to a higher scientific training, but a considerable number of operations were still performed by uneducated specialists.

Besides those in Italy and France, there were also in England, Germany, and Holland a small number of highly educated and distinguished surgeons.

The greatest improvements in surgery were brought about in Italy by Fabricius of Aquapendente, who largely practised tracheotomy; in France by Pierre Dionis, who simplified the operation of trephining; by Morel, who introduced the use of the tourniquet; and by Frere Jaques, a travelling lithotomist, who developed the ordinary lateral operation.

In Germany were Fabricius and Scultetus, and in England Woodall and Wiseman, who improved the methods of amputation, and recommended the treatment of aneurism by compression.

About this time we find the first distinct writings regarding lithotrity. As I formerly mentioned, vague indications of the possibility of this operation had been given in the writings of the Byzantines and Arabians, but now for the first time we have from Benedetti, and later on from Santoro, descriptions both of the operation and the instruments employed; while Ciucci, in the middle of the century, himself underwent the operation. His instrument much resembled that employed by Civiale in his first operations, consisting of toothed forceps contained in a canula, but without the central perforator.

About the middle of the eighteenth century special schools for the training of army surgeons were established on the Continent. The need for such institutions you will readily understand, when I mention that up till that time in Germany, although there were two classes of military surgeons, the only real difference between them was that the higher order shaved the officers, the lower the soldiers. German university training in surgery was also very incomplete, the same professor often lecturing on a variety of subjects, and then only theoretically.

The foundation of the Academy of Surgery in Paris by Mareschal in 1731 greatly advanced scientific surgery, not only in France, but also in all Europe. A further improvement was its union with the Practical School of Surgery, in which Chopart and Desault were the first teachers. This famous institution disappeared, along with many others, at the time of the Revolution, but during the sixty years of its existence it produced many of the most distinguished surgeons of the time, as well as a vast amount of valuable medical literature. Of these surgeons Petit was the most renowned; his name is best known from the improvements he made in the tourniquet; curiously enough, he, like Paré, commenced life as a barber. The others worth remembering are Le Dran, who wrote on concussion of the brain, and first disarticulated the arm at the shoulder-joint in 1718; Garengeot, a great lithotomist; Chopart, famous for the amputation which bears his name; and Desault, who first established the teaching of clinical surgery in Paris.

In England, at this period, surgery in all its branches, but especially in operative skill and anatomical knowledge, was unsurpassed. William Cheselden had made himself famous as a lithotomist; Percival Pott, who was equally distinguished as an operative teacher and anatomist, is now best known from his writings on fractures and diseases of bone; while John Hunter was the greatest of them all, for not only was he distinguished as a surgeon, but in every other department of medical science he was *facile princeps*. His works on the treatment of wounds and aneurism, but especially on syphilis, would of themselves have established his reputation. White also did good work by his reintroduction of the excision of joints.

Among other surgeons of eminence may be mentioned Schmucker, Heister, Hesselbach, and especially Richter in Germany; Scarpa, Lancisi, and Morgagni in Italy; Callisen in Denmark.

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A better knowledge of the anatomy of hernia was obtained through the researches of Littré, Camper, Gimbernat, and Richter. Chopart wrote on diseases of the urinary organs, while Duran introduced the employment of elastic bougies. Improvements were made in amputation, both as regards methods and time of operating, as well as in the treatment of aneurism, through the operations practised by Hunter, Scarpa, and Brasdor.

We now come, gentlemen, to the surgery of the present century, and we cannot help being struck by the vast improvements which have taken place. These have been brought about by the scientific methods of investigation which have been introduced into all branches of medicine. The great advance made in the study of chemistry, and the universal development of the use of the microscope, have led to an enormous increase of our knowledge of physiology, anatomy, and pathology. Scientific as well as conservative surgery has made great strides.

The ease and rapidity of communication between different countries, and the spread of medical literature, has also to a great extent made advances in surgery partake less of a national and more of a universal character.

The leaders of surgery in our own country have been, in Edinburgh, the brothers John and Charles Bell, their namesake Benjamin Bell, and Munro; while, more recently, Lizars, Liston, Fergusson, Syme, and Spence have worthily maintained the reputation of this school. In England, at the commencement of this century, Astley Cooper, Lawrence, Abernethy, Hey, Brodie, Guthrie, and later Paget, with many others, have upheld the renown of British surgery.

In France, Boyer, Delpech, Larrey, and Dupuytren, and later on Roux, Malgagne, Velpeau, Nelaton, Richet, and many others, have enjoyed a world-wide reputation.

Germany also began to come to the front under the auspices of Schuh, Wutzer, Hesselbach, Stromeyer, Diffenbach, and many others still living, so that now she stands equal to any other nation as regards scientific surgery.

Italy, on the other hand, has somewhat retired from the proud position she once occupied, Scarpa, as an anatomist and surgeon, being perhaps the only one who has earned for himself a European reputation.

American surgery must also not be forgotten, Mott, Warren Smith, Bigelow, Van Buren, Sayre, and many others, being well deserving of mention.

I shall now very shortly allude to the distinct improvements in surgery to which this century has given birth.

The discovery of anæsthetics may be said to have revolutionized surgery. Its horrors have disappeared, and operations unthought of before are now of daily occurrence. As I formerly mentioned, rude and dangerous attempts were made during the Middle Ages, but Sir Humphry Davy was the first, at the commencement of this century, to point out the anæsthetic effects of nitrous oxide gas, and to suggest that it might be used as a help in surgical operations. This suggestion was not acted on, and the subject was allowed to drop for more than fifty years, until in 1844 Horace Wells, an American dentist, having seen one of the audience at a chemical lecture put under the influence of laughing gas, was led to employ it on patients during the extraction of teeth. He then attempted the use of ether, at first with little success, but in 1847 he administered this anæsthetic to two patients while undergoing surgical operations. Dr Jackson, however, also an American, was undoubtedly, in 1841, the discoverer of the anæsthetic effects of the inhalation of ether, but it was not until 1846 that he, along with a dentist of the name of Morton, employed it successfully for the extraction of teeth, and later on during surgical operations.

But to Sir J. Y. Simpson undoubtedly belongs the credit of having, by his writings and investigations, brought anæsthetics into universal employment. He first employed ether in January 1847, and shortly thereafter, at the suggestion of a chemist named Waldie, he introduced the use of chloroform. This substance was discovered by Soubeiran in 1821, and had been tried on animals by Charles Bell and Flourens, but Simpson was undoubtedly the first to employ it on the human subject.

Various other substances have since been introduced as being safer or more expeditious, and at the present day different schools employ different anæsthetics, each claiming the pre-eminence for their own favourite.

Next to anæsthetics, perhaps the greatest improvement in our art has been the introduction of the antiseptic treatment of wounds; and this, I wish to impress upon you, does not consist merely of a form of dressing, but depends upon a theory as to the cause of putrefaction in wounds, and its relation to those inflammatory affections which lead to suppuration and delay in healing, and tend to produce general disorders dangerous to life.

This theory—or one may now more correctly say, this truth—has for its basis the fact that the atmosphere is to a greater or less extent, depending upon external circumstances, impregnated with minute organisms, which tend to produce putrefaction and other fermentative changes, when brought in contact with animal matter under favourable circumstances.

Aseptic surgery consists of those methods adopted to prevent their introduction into wounds; antiseptic surgery, in those which tend to destroy their action when from any cause they have gained entrance. A belief in this general truth is the all-essential, not a mere pinning of your faith to sprays, or pink mackintosh, or carbolic gauze, which are mere means to an end. These means have greatly changed during the last fifteen years, are changing just now, and will doubtless change still more in the future; and though for the present we must regard them with all respect as the best yet invented by those great minds which have specially directed their attention to this subject, still a mere blind imitation, without regard to the great truth which has led to their employment, will never with any certainty lead to the wished-for result. These methods are at present complicated, expensive, and difficult of application, and a simpler one, suitable for more universal adoption, is much to be desired.

Another point, and one that you are likely to overlook, and which I would wish to impress upon you, is, that good results were obtained before the introduction of this system. This is no reason, however, for its non-adoption, even as the fact that an unvaccinated individual may have the good luck to enter a smallpox ward without taking the disease, is no reason for non-vaccination.

Although, at the commencement of the century, Vincenz von Kern, in Vienna, drew attention to the importance of fermentative changes in wounds, and attempted to prevent their occurrence, still, undoubtedly, it is to Joseph Lister that we owe the almost universal belief in this theory, and method of treatment. He it was, that in spite of many difficulties, and at first much derision, steadily worked on, until at length his name is honoured and his system employed wherever surgery is scientifically practised; and it is only those who remember surgery as it was, and see what it is now, that can fully appreciate the immense improvement that has resulted from its use.

Although, in the Middle Ages, rude attempts had been made for the removal of stone from the bladder, through the urethra, by means of crushing instruments, still lithotrity must essentially be regarded as an operation of this century; and to Civiale must be relegated the honour of bringing it into general use. Many improvements, both in instruments and methods of employing them, have since taken place; and through the introduction by Bigelow of Boston of litholapaxy, or lithotrity at one sitting, the older operation of lithotomy is threatened with extinction.

Abdominal surgery, or the removal of large tumours from the cavity of the belly, has now, through the exertions of Spencer Wells, Keith, Koeberle, and others, taken its place as a regular and safe means of treatment, though five-and-twenty years ago such operations were still regarded by many as foolhardy and unjustifiable.

Bloodless operations on the limbs, though formerly practised in a modified form, were first brought into general use by the writings of Esmarch of Kiel, who recommended the employment of an elastic bandage for this purpose.

The immense advance in our knowledge of the diseases of special organs, by the introduction of the ophthalmoscope, laryngoscope, endoscope, and similar instruments, has only to be mentioned to be appreciated.

How much we have gained in the domain of orthopedic surgery, or the prevention and correction of deformities of the body, by the introduction of subcutaneous tenotomy and the employment of immovable apparatus of plaster of Paris or similar substances, cannot be overestimated. Continuous extension and elastic compression have done much to alleviate the suffering and promote the cure of joint affections, while the improvements effected in excision have enabled us to save many a limb that would otherwise have been sacrificed; and even in those which, however unwillingly, we must remove, modern methods of amputation tend to render the operation safer and the result more satisfactory.

We have also learned much as to the anatomy, causes, prevention, and cure of hernia.

Plastic operations, and those introduced for the cure of cleft palate and vesico-vaginal fistula, have shown us what genius combined with operative skill can accomplish.

Transplantation of portions of animal textures from one individual to another, which until lately was regarded as one of the idle tales of the Middle Ages, has now become an accomplished fact.

Nerve-stretching, for the alleviation or cure of neuralgia and other affections, has opened out a new domain for investigation; while the introduction of the galvano-caustic apparatus, thermo-cautery, ecraseur, and numerous other instruments, has shown us what modern science combined with mechanical ingenuity can do.

And now, gentlemen, I must be done: not that I have completed this subject, for I have merely touched upon its outskirts, but time will not permit, and I fear to weary you. But before we part for the day, let me impress upon you the importance of not supposing, that because so much has been done by the great minds of the past and present, it therefore only remains for you to rest on your oars, and profit by their labours, feeling a regret, like Alexander, that there are no more worlds to conquer. No, gentlemen, we are just on the threshold of a new era of surgery; there is much to be learned, much to be done. We are dimly groping our way along the pathways of science, often stumbling and even falling, but still continually pressing forward; and when, at times, gleams of light do fall upon our way, we then are surprised to find how smooth and easy it all is, and cannot imagine whence the difficulties arose.

Yes, gentlemen, modern scientific surgery is indeed a grand science, not a mere mechanical art, as in the time of the barbers and travelling specialists, and it is as such that you must approach it.

It may be the lot of some of you, gentlemen, to succeed where others have failed, to elucidate some great truth at present unknown and unthought of; but you must remember that this can only be done by patient, laborious, and steady work, and it is in this spirit that I would wish you to conduct your studies,—not looking upon surgery as a mere dull, dry collection of facts, to be learned off and committed to memory against the day of examination, but as a living, constantly progressive science, moving as you move, changing from day to day as you change, and ever leading you onwards. And as you advance in knowledge and experience, may you be enabled to keep before you, as the directing principle of your lives, that grand old rule, which applies to many other things besides religion, "Not as though I had already attained, either were already perfect, but I follow after, if that I may apprehend."

Part Second.

REVIEWS.

THE BOSTON SOCIETY FOR MEDICAL OBSERVATION

A Manual of Obstetrics. By A. F. A. KING, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of Columbian University, Washington. London: Henry Kimpton & Co.: 1882.

THE author of the volume before us disclaims any attempt at producing anything new, and states that his book is composed of gleanings from recent treatises, especially those of Playfair and

Lush. We entirely agree with him in his assertion that there is nothing new in this work; but we do not think he has always succeeded in selecting the best materials from his favourite authors. For example, we consider his management of abortion as essentially defective and positively bad, in so far as it recommends dependence upon the antiquated, dirty, unreliable, and dangerous tampon. We wonder, also, on what grounds the author maintains that, owing to the psoas muscle, the transverse diameter of the pelvic brim is reduced to 4 inches.

A long list of special pelvic deformities is given. The descriptions, though brief, are on the whole correct. But judge our astonishment when the author, apparently from the innocence of complete ignorance, explains that operative management in deformed pelvis is regulated only by the size of the antero-posterior diameter. In this manner he treats the flat and the uniformly contracted pelvis as if the same operation were required in each for the same antero-posterior contraction, although in describing these pelves he gives the mechanism essentially correct. We were not prepared for such erroneous teaching at the present day from a countryman of Goodell's. We had believed that turning was suitable in the flat, and forceps in the uniformly narrowed. We do not agree with his statement that turning is safe for the child in pelves that are too narrow for forceps. We believe such is not the fact, and that you must determine in every case the nature of the deformity before you can with propriety decide upon what is the operation likely to be most successful.

While giving what we believe is, on the whole, the correct principle in regard to the treatment of placenta prævia, that the "best rule is to deliver as soon as practicable after the first occurrence of hæmorrhage, whether the child is viable or not" (although we should be inclined to limit this recommendation to the *first* occurrence of *really serious* hæmorrhage), we consider the author errs in recommending so prominently digital separation of the placenta. What good in the world can be expected from such a separation that cannot be better effected by a dilated Barnes's bag, which possesses the important advantage that it almost completely stops bleeding at the same time?

Simpson's method of treating placenta prævia never consisted, as stated by Dr King, "in completely separating and extracting the placenta, trusting to powerful uterine contraction for subsequent rapid delivery of the child." Simpson only recommended this treatment under certain specified conditions, and taught, in general circumstances, the same methods of treating placenta prævia as are usually adopted, viz., rapid delivery after turning. In dealing with uterine rupture the author shows himself sadly behindhand in regard to the present position of our knowledge of the subject. It is surely hazardous treatment to suggest the advisability of early Cæsarean section in treatment of acute posterior hour-glass contraction of the uterus. We have seen a very well-marked case of this complication yield readily to deep narcosis and version.

One is prepared to find chloroform objected to as an anæsthetic in America; but we must state that no evidence has hitherto been produced which satisfies us that its claims to be the pleasantest and the safest anæsthetic in midwifery practice are not well founded. It is certainly a long way ahead of chloral both as to safety and suitability, although we find ourselves in this respect differing from our author.

The author believes, apparently, in a puerperal septicæmia as distinct from puerperal phlebitis with pyæmia-producing thrombi, although he states that such condition has septicæmic symptoms added to it. We think the author would be nearer the truth if he asserted that both cases began as septicæmia, but that in one case the lymphatics were the channel by which the sepsis formed, and in the other the veins were invaded. Surely such a phlebitis as he describes is a very different condition from ordinary phlebitis.

Warburg's tincture, on the authority of Playfair, is recommended as a substitute for quinine in puerperal septicæmia. We only wish our experience supported the belief in its value. But, alas! like most other medicaments in that mournful condition, it has proved itself utterly worthless in our hands.

The book is, as our readers will see, far from a specially accurate or scientific contribution to midwifery. It is, however, on the whole, not a bad cram-book, as it is forcibly and pleasantly written; but while it is scientifically inferior to some of the small manuals at present in use, it has, to our mind, no special qualifications to lead us to think that it will meet and supply any felt want in this country.

Transactions of the American Gynecological Society. Volume VI., for the year 1881. Philadelphia: Henry C. Lea's Son & Co.: 1882.

THE Transactions of this society fully maintain their high character, and demonstrate a high state of advancement and steady progress of gynecology in America.

The veteran president of the society, Dr Byford of Chicago, commenced the work of the last year's meeting by some interesting remarks upon the progress of gynecology in America and the efforts of the society to that end, concluding with an appeal to his American brethren to combine in honouring the memory of Ephraim Macdowell, the father of ovariotomy, by raising a fund, to be styled the Macdowell fund, the annual interest of which would be spent in awarding an annual prize for lectures or essays upon subjects connected with gynecology.

Among the other papers of special merit that were read before the society may be mentioned that by Dr Garrigues of New York, in which he gives an abstract of his researches upon exploratory puncture of the abdomen. The paper is based upon the examination of ninety-four cases, in fifty-seven of which the author was absolutely certain of the diagnosis, as the fluid was obtained after operation, whilst in thirty-seven cases the fluid was obtained by tapping. His results differ in some important particulars from those usually held. We may notice that Garrigues regards what is usually called Drysdale's ovarian cell as not a cell at all, but the nucleus of a pre-existent cell, and does not regard it as of diagnostic value. Only cylindrical cells seen in side view does the author consider as indicative of ovarian origin. But even in that case the presence of the cell only proves that the fluid is from an ovarian cyst, a cyst of the broad ligament or of the Fallopian tube. Dr Garrigues proves that the test known as Scherer's test for paralbumen is worthless as evidence of ovarian origin, and also that the sudden coagulation of a serous fluid, without admixture of blood or any other foreign substance, is by no means universally true of the fluid obtained from fibro-cystic tumours. In regard to malignant ovarian cysts Dr Garrigues differs from the views of Thornton, and we think also of Foulis, in maintaining that their histological elements are not distinctive of their character. Dr Garrigues, in four cases of cysto-sarcoma, and in three of cysto-carcinoma, could find nothing in the quantity, size, or arrangement of the elements to demonstrate malignancy, or anything except great abundance of histological elements.

Dr Tyman of New York contributes a long paper, with cases, entitled "Notes on Cases of Pelvic Effusion." The author insists upon the necessity of greater attention being paid to the diagnosis of such conditions, gives some hints to help the practitioner in gaining that end, and, while averse to interference operatively before the tumour suppurates, recommends opening the abscess and drainage whenever suppuration is certain. The cases, forty-one in number, are valuable, but there is little either new or striking in the communication otherwise.

Dr Bozeman, in a paper on "Genital Renovation by Kolpostenotomy and Kolpoecpetasis in Urinary and Fæcal Fistulas," ably supports his views regarding the necessity to aim at renewal of the genital passages, or, as he calls it, anakainosis, in preference to genital kleisis, as urged by the late Professor Simon.

We think Dr Bozeman proves his case, both in respect to the ultimate disasters that certainly follow genital kleisis, such as the formation of large urinary calculi, dilatation of the kidneys, and blood-poisoning, and in respect to the practicability, by skill and patience, of renewing the passage in even very hopeless-looking cases. But we do dislike the painful affection the author has for abominably long terms of Greek origin, such, for instance, as kolpoecpetasis, cystostellosis, hysterokleisis, kolpourethridcystokleisis. The result of such a parade of Greek derivations is to render a truly valuable paper almost unintelligible to the average reader. In this connexion we are tempted to ask how such an authority in Greek could concoct the barbaric redundancy episiovulvakleisis. A valuable record of fourteen operative cases accompanies the paper.

A paper on "Forcible Elongation of Pelvic Adhesions," by Dr Van de Warker, met with the almost unanimous opposition of the members. In this we feel very strongly they had right on their side. It must rarely, if ever, occur that such procedure is warrantable, and is not more certain to induce further trouble to the patient than to remove the old distress.

Dr Isaac Taylor contributes a paper on "Lupus, or Esthiomene of the Vulvo-anal Region," which is illustrated by two good drawings, and gives a valuable account of this ill-understood and rare disease. Dr Taylor has met with no fewer than seven cases of this affection in its various forms.

He, rightly, as we think, maintains that vulvar lupus is essentially distinct both from epithelioma and syphilis, though it has been confounded with both of these diseases and may coexist with either. The clinical history and symptoms are more reliable as determining the affection than results hitherto attained by the microscope, which are somewhat contradictory as given by various authorities.

As to treatment, Dr Taylor recommends internally bichloride of mercury in doses varying from 1-25th to 1-30th of a grain, or in Donovan's solution. Locally, for the serpiginous superficial forms, the use of solution of pernitrate of mercury, dilute and sometimes pure nitric or acetic acid. Unguents were avoided. Gentle scraping was resorted to in two cases. The brown-red heated cautery was now and then resorted to. Where no improvement followed these measures in the tumour-like form of the disease, the hardened, hypertrophied tissues were removed by a peculiar kind of scissors, which the author calls eroding scissors, and the surface lightly brushed over with the brown-red heated cautery, the solution of biborate of soda or of acetate of lead being afterwards applied.

The author did not employ the white-heat cautery in any of his cases. The results of treatment of the seven cases are stated by the author as two cured, two relieved, two not relieved, one died.

"Bursting Cysts of the Abdominal Cavity" are treated by Dr Goodell in a delightfully interesting manner. The record of several curious cases of this accident, and the contradictory results which different observers arrived at in regard to one patient in particular, are detailed with pleasing graphicness.

"Expansion of the Bladder over the surface of Abdominal Tumours, and its Attachment to them or to the Abdominal Walls, as a Complication of Laparotomy," is ably handled in a paper by Dr T. Gaillard Thomas, which deserves the attentive perusal of every surgeon who is in the habit of performing abdominal section. Dr Thomas refers to seven recorded cases of this accident, in all of which a fatal issue has been the result either of injury done to the bladder or inability to remove the tumour in consequence of the adhesion. These seven cases are referred to in detail, and an eighth is added in which the author found the adhesion of the bladder to a large ovarian cyst was so extensive and intimate that it was impossible to determine where the bladder ended and where the tumour began. The diagnosis was further embarrassed, after the existence of the adherent bladder was suspected, by the impossibility of passing a catheter. Dr Thomas now opened into the anterior wall of the bladder, and, using the index finger as a director, was able to determine with accuracy the limits of its attachment, and separate it from the tumour without further injury. But the crowning step in the operation was the manner in which risk of evil from the wound in the front wall of the large bladder was obviated. This was effected by so imprisoning the edges of the bladder wound between those of the abdominal wound, when the latter were brought together, as to make the abdominal wound act as a sort of clamp to secure coaptation between the bladder surfaces. This he did by making the abdominal stitches in front of the bladder opening include both the walls of the bladder as well as the edges of the abdominal walls.

The case did well. There was only a urinary fistula in the abdominal wound about the size of a cambric needle, which was easily obliterated, after recovery of the patient, by a twist of a tenotomy needle and a single suture.

Dr Albert Smith, in an article on "Axis-Traction Forceps," criticises the instrument of Tarnier and its modifications by Professors A. R. Simpson and Lusk, objecting to them all for various reasons. He holds that with the ordinary forceps traction in the direction of the pelvic axis with the head at the brim is perfectly possible if the direction of force is properly regulated. He recommends to maintain the grasp of the instruments by the right hand whilst the left hand exerts pressure downwards and backwards in the neighbourhood of the lock. This method he traces to Osiander. He also claims for Hermann of Berne the credit of constructing an instrument in 1844 that is in principle identical with Tarnier's instrument, only much more simple of construction, and of publishing a pamphlet in which he elaborated the identical theoretical theorems and mathematical methods of proof by which Tarnier, thirty-three years later, floated his forceps into fame. But then, Dr Smith says, Hermann was not a professor.

The paper is illustrated by some heliotype drawings of various forceps referred to.

Some useful information on the practice of gynecology in ancient times is given by Dr Edward W. Jenks in a contribution on that subject.

But space does not permit us to refer to the other papers in detail, and we must accordingly content ourselves with a simple enumeration of them. They are, "On Acute Hyperæsthesia of the Peritoneum following Nine Gynecological Operations," "Erysipelas in Childbed, without Puerperal Peritonitis," "Fibroid Polypus, with Partial Inversion of the Uterus," "Measurements of the Uterine Cavity in Childbed," "Jaundice in Pregnancy."

There are also some useful contributions from candidates elected to the Fellowship of the society.

On the whole, the volume, with the accompanying discussions, besides being a credit to the society whose labours it chronicles, forms a substantial contribution to the literature of gynecology, and will well repay perusal.

Therapeutical Remembrancer, presenting in detail all Medicaments accredited by the British Pharmacopœia; with Copious Supplementary Tables offering or recalling Suggestions of Resource from the Materia Medica, etc. By J. MAYNE, M.D., L.R.C.S.E. Second Edition, Revised. London: J. & A. Churchill: 1882.

IN his preface Dr Mayne speaks of this book as a "convenient and reliable digest, a refresher of the memory in respect of all names of individual medicines, their uses, and the modes suitable for their exhibition." We have read it very carefully, and have failed to find these desirable objects in this volume. The book contains many mistakes. At page 3 he speaks of *chalk* as *calcis chloridum*, by which he understands *bleaching powder*; at page 5 he speaks of *hydrargyri ammoniatum*; at page 9 he gives the following formula,—

℞ Ferri iodidi.
Extract. gentianæ.
M. F. massa, in pil. div.,

evidently unaware that the iodide of iron is so unstable that it could never be so used. We could mention other mistakes, but these are sufficient to convince our readers that it is not a book which can be recommended.

The New Handbook of Dosimetric Therapeutics; or, the Treatment of Diseases by Simple Remedies, including Symptomatology, Thermometry, and Uroscopy, etc. By Dr AD. BURGGRAEVE. Translated from the French and edited by HENRY ARTHUR ALLBUTT, M.R.C.P.E., etc. London: David Bogue: 1882.

THE translator claims for "Dosimetry" *immense advantages* over all other therapeutic systems, and would lead us to believe that it can "cut short at their outset all acute diseases (fevers, inflammations, and congestions)." Remittent and continuous fevers are said to yield to this treatment as certainly as intermittent fevers yield to the alkaloid of the cinchona, and that thousands of practitioners have proved this fact. These references are quite sufficient to give our readers an idea of the pretensions of this volume, reminding us very forcibly of the advertisements of quack medicines, and we have no doubt that dosimetry will be found equally efficacious. It is not a book which we can commend to our readers.

THE BOSTON SOCIETY FOR MEDICAL OBSERVATION

A Practical Treatise on Diseases of the Skin. By LOUIS A. DUHRING, M.D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, Author of *Atlas of Skin Diseases,* etc. Third Edition, revised and enlarged. Philadelphia and London: J. B. Lippincott & Co.: 1882.

BARELY eighteen months have elapsed since the second edition of this excellent work was published, and now a third, in all respects improved, has appeared. It speaks well for the earnestness with which an important branch of medicine is being studied, that the author has found it necessary to increase its size by over forty pages, and yet he cannot be said to have assimilated any doubtful ingredient. Such an advance has been made of late in our knowledge of the structure of the skin, that the chapter on its anatomy and physiology has been written anew, and will be found to present an abstract of the most recent researches. In particular, new modes of examination have enabled observers to form much more accurate conceptions of the formation of the mucous layer of the skin, and of the relations which exist between this and the other strata which go to make up the epidermis. All the newest views will be found summarized and brought into connexion with one another, and thus the whole subject is made more intelligible. It is only after a complete acquaintance has been arrived at of the microscopic anatomy of the skin in all its component parts that we can hope to have a solid basis for its pathology. This is being rapidly approached, and such admirable descriptions as the one before us, while they show what has been so far definitely ascertained, also exhibit where observations are still defective. The whole chapter will be found well worth a careful perusal. When we turn to the body of the volume, where it deals with diseases of the skin in detail, we are led still more to admire the industry with which all that is best among the suggestions made, either in Great Britain, the Continent, or in America, has been incorporated with the text or alluded to in notes. Indeed, what have been omitted are mostly modes of treatment which have not yet stood the test of experience, and whose value is at the best yet doubtful. In the article on eczema, one whose revision has been conducted with singular care, we notice that some of the most valuable hints contained in Dr Bulkley's recent and exhaustive volume on the subject have not received recognition. This, however, may have arisen from a sense of delicacy towards a work which has been so lately published, the author desiring that Bulkley's views should be studied in the original, and we respect the feeling. It were well if all other American authors and publishers extended as much forbearance towards British medical works in general. The only portion of the description of eczema in which there is a want of fulness is that devoted to the forms which attack the palms and soles. Here the author has certainly failed in conveying by words an accurate picture of the variety, and this is all the more surprising, for the account given of all the other forms is extremely graphic. More ample details as to the management of this, perhaps the most intractable of all the kinds of eczema, would have been excessively valuable. Lichen circumscriptus is not even alluded to. It would seem as if lichen in all its forms is less common in America than with us, and this certainly does constitute an important distinction between the skin diseases of the New and the Old World. No representation of lichen is given in Duhring's Atlas. Bulkley, in an analysis of 8000 cases of skin diseases contained in his Manual, gives the number of instances of lichen as 148, but does not subdivide these in any way. He treats, too, of lichen simplex as distinct from eczema, and regards lichen circumscriptus as a variety of the simple kind. Duhring, on the contrary, holds that lichen simplex is but a synonym for papular eczema. We think that the majority of cases of so-called simple lichen are papular eczema; but there undoubtedly exists a true papular disease of the skin, unattended by many subjective symptoms, and often not evidently associated with much constitutional disorder, which comes very naturally into the same class as lichen rubra and planus, and is yet distinct from these. It probably includes the lichen scrofulosus of Hebra. Both Liveing and Malcolm Morris have contributed to the disentangling of this ravelled skein, and Fagge has also done a good deal in the same direction; but Duhring has not in his work even alluded to the subject. His account of lichen scrofulosus is a mere condensation of what Hebra and Kaposi have written about it. When we consider the apparent amount of material, according to Bulkley's statistics, this seems strange, but the different opinions held by the two authors as to what is be regarded as lichen may account for Duhring's silence. An exceedingly valuable section is that devoted to medicinal rashes, included under the general term dermatitis. These have of late been more fully studied, and have even been classified by Behrend. Duhring inclines to the view originally stated by Virchow, that so-called molluscum contagiosum originates in the rete mucosum, and not in the sebaceous glands, and names the disease molluscum epitheliale. Why not call the disease simply molluscum, and adopt the term fibroma for the disorder of the subcutaneous tissue misnamed molluscum fibrosum? Placing the diseases side by side, he yet separates scleroderma from morphœa, and points out that it is wrong to call the latter circumscribed scleroderma and the former diffused, since morphœa is often very far indeed from being circumscribed. Indeed, we would go further, and say that it is usually, in our experience, more diffused than scleroderma. A good account is given of the various ways in which scrofula attacks the skin, a point in dermatology to which Duhring has devoted considerable attention. In treating of syphilis he takes up the subject at that period in the course of the disease when eruptions manifest themselves on the cutaneous surface, and thus avoids the consideration of those knotty questions connected with the unity and duality of the poison, the relation which the induration of the chancre bears to the constitutional infection, and many others. The types of eruption and the way in which they become transformed one into another, and the mode in which one form overlaps another, are tersely and carefully described, and the diagnosis of each specially insisted on. The work is handsomely got up, is printed in beautifully clear and large type on fine paper. It is certainly the most complete and systematic treatise on the subject in the English or any language, and will be found a most trustworthy and reliable guide.

Journal of Cutaneous and Venereal Diseases. Edited by HENRY G. PIFFARD, A.M., M.D., and PRINCE A. MORROV, C.B., M.D. Issued monthly. Vol. I., No. 1., October 1882. New York: William Wood & Co.

WE have been favoured with a copy of the opening number of this new journal, which marks a fresh departure in the literature of cutaneous medicine. Hitherto four times a year has been thought often enough, but the enterprising editors of this magazine believe there is sufficient material available for a monthly issue. In the prospectus it is stated that though there are five journals devoted to the subjects of which it treats, this is the only one in the English language. What becomes, then, of the *Archives of Dermatology?* Dr G. H. Fox contributes a paper on the development of trichophytosis cruris, illustrated by a well-executed chromo-lithograph. Dr Taylor follows with notes on psoriasis, in which he endeavours to establish an hereditary syphilitic taint, based on an idea of Sir Erasmus Wilson's, as at least probable in a certain proportion of cases. This led to an animated discussion at the meeting of the American Dermatological Association. Atkinson has a paper on syphiloderma papulosum circinatum; and Bulkley treats of acne atrophica or lupoid acne, drawing from his clinical experience some cases in point. Reviews and some interesting selections from the writings of others in the less accessible serials conclude the number. If the succeeding ones can be maintained to the same standard of excellence, this periodical will prove a success.

The Transactions of the Perthshire Medical Association. Edited by A. R. URQUHART, M.D. Vol. I. Sessions 1879–80, 1880–81. Perth: Printed and published for the Society by J. Young & Sons: 1882.

THIS first volume of Transactions is one on which the Association may be congratulated. There are fifteen papers in all, but from the *résumé* of the proceedings we find that several others remain unpublished, and one or two have been published elsewhere. A wide range is covered, such diverse subjects being discussed as Nerve-Stretching in Sciatica, Posture after Parturition, Action of Belladonna in Obstruction of the Bowels, Diphtheria, Uterine Prolapse in a Nullipara, Puerperal Eclampsia, Farcy, Home Treatment of Insanity, Chronic Bright's Disease, and the Long Sea Voyage in Phthisis. The paper by Dr Thom, jun., on "The Therapeutics of Belladonna in Intestinal Obstruction," seems to us specially valuable in so far as it points out the assistance the therapeutical action of that drug is likely to receive from the exhibition of aperients, such as podophyllin, after its physiological action has been established. His views as to its *modus operandi* are not so important. The theory that it stimulates the splanchnics, and so inhibits the greatly increased peristaltic action supposed to exist in obstruction, is very pretty and may be quite true, but investigation is required before it can be received. The effect of belladonna on the sympathetic system is not yet thoroughly understood, and in some instances it would seem to be the reverse of stimulation.

Diphtheria has a prominent place in the volume, there being no less than four papers devoted to it or its manifestations and treatment. The first of these deals with its history and etiology; but Dr Morell Mackenzie (in *Diphtheria* and *Diseases of Throat and Nose*, vol. i.) seems to have so thoroughly exhausted these subjects that he has not only forestalled the writer with his facts, but, curiously enough, selected almost his identical words, the punctuation being the only part in which the difference is at all marked. Dr H. W. Laing shows an intimate acquaintance with the views of authorities on "Diphtheritic Paralysis," and gives an interesting *résumé* of them. In his "Notes on the Pathology of Diphtheria and on its Non-Identity with Croup," Dr Graham cites Jenner on behalf of the non-identity view. We would ask him to read the *Lancet* of Jan. 16th, 1875, and consider if his citation be justifiable.

With but few exceptions, the whole volume is of very great interest and will repay perusal. The writers are men engaged in active practice, and their experiences are well worth listening to. Nevertheless, there are two things one cannot help being struck by. The first is the apparent fondness of some of the authors for carbolic oil as a surgical dressing. In one paper it is said to have been used in the proportion of 1 to 12. No wonder the writer adds, "As may well be supposed, there is rarely union by first intention." Carbolic oil, except when used in the way recommended by Dr P. H. Watson, is a good irritant and retards healing, more especially when applied to granulating surfaces. The second is, that although capital clinical notes of several fatal cases are given, there is, with one exception (Dr Howard Bendall's case of Farcy), no record of a post-mortem examination. This should not be. It greatly lessens the value of the clinical histories. We would recommend, in connexion with this, a perusal of Dr Hughlings Jackson's address in the Section of Pathology at the Worcester meeting of the British Medical Association.

The Owens College Course of Elementary Biology. Part I. The Frog. By A. MILNES MARSHALL, M.D., etc., Professor of Zoology in Owens College. Manchester: J. E. Cornish: 1882.

THIS is a small but useful manual for the student of practical zoology. It covers much the same ground as that occupied by Huxley's "Frog," in the Huxley and Martin manual of elementary biology. It differs from the latter book in being of somewhat fuller nature, and is to be followed by another part devoted to animals "selected as types of the leading animal groups." A number of plain directions for practical work, form a good introduction to the book, and the anatomical description of the frog has, on the whole, been carefully written. The manual will, we doubt not, serve the purpose for which it is intended, although necessarily there are many details given in the work which the junior student will do well to omit on a first dissection, and for the due appreciation of which the aid of the teacher is absolutely necessary.

Science in Short Chapters. By W. MATTIEU WILLIAMS, F.C.S. London: Chatto & Windus: 1882.

A COLLECTION of short essays on very varied topics. The reader will not grow weary over this work, which contains a large number of interesting and instructive facts, chiefly relating to chemistry and geology, but which also includes matters so diverse as the fuel of the sun and spiritualism. We can commend the work as good company for a leisure hour. It is always entertaining, and never tedious or dull.

Brehm's Zoological Atlas. Edinburgh: T. RUDDIMAN JOHNSTON: 1882.

THIS Atlas, which forms a classic work in Germany, has been reproduced in an English form, and presents the student with a lifelike series of reproductions of the various animal groups. The book will be found to constitute a useful companion to the medical student in his zoological reading; whilst, as a work of art, the encomiums passed upon Brehm's figures by Darwin and others fully justify the warmest commendations of this Atlas.

Part Third.

MEETINGS OF SOCIETIES.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION LXII.—MEETING I.

Wednesday, 1st November 1882.—Dr G. W. BALFOUR, *President, in the Chair.*

I. PUBLICATION OF TRANSACTIONS.

The President said that before the business commenced he thought he might congratulate the Society on the appearance that day of the first volume of their Transactions. He had no doubt that they would add greatly to the prosperity of the Society, and he hoped that this prosperity would go on increasing year by year.

Mr Joseph Bell proposed a vote of thanks to Dr Craig for his labour in editing the Transactions. No one could tell so well as himself (Mr Bell) of the time and trouble Dr Craig had devoted to this work. It was evidently to him a labour of love. He had promised that, if possible, members should have copies before the commencement of the winter session, and how well he had kept his word they all knew.

Dr Coldstream seconded.

The President conveyed the vote of thanks to Dr Craig, who replied that he did not know how to properly thank the members of the Society for the kind way in which they had accorded him this vote of thanks. He felt that it was not he who deserved it, but those gentlemen who, by their communications, exhibition of patients and specimens, and original papers, had made this first volume of the Transactions a most valuable one. Any little work he had done in connexion with the volume was a labour of love so far as he was concerned. He hoped that each year the volumes would increase in interest and importance.

II. Election of New Member.

John Archibald, M.B., F.R.C.S. Ed., Brixton, was elected an Ordinary Member of the Society.

III. Exhibition of Pathological Specimens.

Dr C. W. MacGillivray showed a calculus removed by the operation for lateral lithotomy about a month ago from a patient æt. 71. It consisted of a uric acid nucleus with a phosphatic deposit on the exterior, and weighed 1 oz. 5 drs. when removed. The outside phosphatic deposit broke when seized by the forceps, and had to be removed in fragments from the bladder. The duration of the urinary symptoms was twenty years. They were aggravated during the last ten, and latterly had become unbearable. Though he had been frequently sounded by various medical men, the presence of the calculus was not detected till September of this year. His medical attendant then sent him to Chalmers Hospital. On admission he was found to be very much reduced in health, suffering from very severe urinary irritation, and unable to retain his water for longer than twenty minutes; an examination of the urine showed that it was alkaline, slightly albuminous, and contained a large quantity of pus and triple phosphates. Before operation the health was got into a better state by rest in bed, dieting, and the administration of citrate of lithia. He had intended at first to have done a litholapaxy, but the age of the patient, the very small size of the urethra, and the persistent cystic irritation, led him to resort to the ordinary operation of lithotomy by the lateral incision. The patient had gone on well and made a good recovery.

IV. Original Communications.

I. *Dr Allan Jamieson* read his paper on THE TREATMENT OF DIPHTHERITIC SORE THROAT, which appears at page 499 of this Journal.

Professor Simpson asked what boro-glyceride was.

Dr Jamieson replied that it was a mixture of borax, boracic acid, and glycerine boiled together (but in what proportions he did not know) for a considerable time, when they formed a compound resembling very closely dull ice. He believed that in the process of boiling some of the borax was changed to boracic acid, and in that way a larger quantity of boracic acid was dissolved in the glycerine than could be otherwise. Probably what remained of the borax had an action in itself that might be beneficial, as it was when applied to aphthous patches in the mouth, and perhaps, also, it assisted the antiseptic properties of the compound. The boroglyceride was not irritant to either skin or mucous membrane. He had applied it to inflamed mucous surfaces and to eczematous skins without any irritating effects.

Professor Simpson thought the Society was greatly indebted to Dr Jamieson for bringing the properties of this compound before them. To himself it was up to that time unknown. He thought it would be a most valuable remedy in the aphthous conditions of the mouth in new-born children, and he would be quite prepared, from what he now heard, to make a trial of it in some of the affections of the uterus. He thought it was likely to be of use in the treatment of vaginal discharges, where they had often to pass from one astringent to another before they effected a cure.

Dr Craig concurred with Professor Simpson as to the therapeutic importance of Dr Jamieson's paper. He had proved satisfactorily that boro-glyceride was a healing agent, and a valuable one. A great many new and old remedies had been recently applied in the local treatment of diphtheria. Where there was no false membrane, the bicarbonate of soda dusted over the parts did good. A more recent remedy, resorcine, which was prepared from the assafœtida series of gums, and now also from the Brazilian woods, by treating them with potash, had proved very efficacious when applied locally in diphtheria and allied affections of the throat. A saturated solution of pepsine (ʒj. to ℥j.) with a little hydrochloric acid had been used in America, and gave sure and permanent relief when painted on. Another substance from Brazil, papaine, which has the power of digesting animal tissues to a certain extent (the people wrapping meat in the leaves of the plant found it tender and ready for consumption in the evening), has also been used recently in diphtheria with marked success.

Dr MacGillivray said that while they felt much interested in the paper, the previous speakers had not touched upon what he thought the most important part of it, the diagnosis. He would like to know from Dr Jamieson the points that made him conclude that his cases were diphtheria. The descriptions seemed to him more like the sore throats one found after exposure to cold in people who were of a rheumatic habit or were suffering from gastric irritation. These were also the cases in which he found that the salicylate of soda had done good, either alone or with guaiacum and bicarbonate of soda. By diphtheria one meant a specific constitutional disease attended with the presence of lower organisms, which might be found both locally in the patches, as also generally in the form of emboli in the kidneys and other organs, thus leading to the albuminuria and other symptoms of blood-poisoning. He thought it most important to distinguish between this specific affection and the ordinary rheumatic sore throat or follicular tonsillitis which was often loosely spoken of as diphtheritic.

Dr Ronaldson agreed with Dr MacGillivray that the question of diagnosis was the important point in Dr Jamieson's paper. He had listened with great interest to it, because of an epidemic of sore throat having occurred, and being largely confined to the district of Morningside. In one week he had seen, in this district, from forty to sixty fresh cases, and there were sixty cases in the Asylum at one time. The other practitioners in the neighbourhood had had the same experience, whereas his inquiries would seem to show that there was very little of it anywhere else in Edinburgh. He had looked upon all these cases as examples of simple inflamed sore throat, and not as diphtheritic. He had treated them on ordinary principles. None were fatal. Most ended in resolution; a few passed on to suppuration. He attributed the epidemic to atmospheric influences, the weather having suddenly changed from fine to cold and wet.

Dr Bruce thought the question of diagnosis a very difficult one to answer. In well-marked cases there was no difficulty, but in slighter cases it was very difficult to decide between simple inflamed sore throat with ulceration and diphtheritic sore throat. Just as in scarlatina, so in diphtheria, some cases are so slight as to get well under any treatment, others so severe that no treatment is of any avail. He had seen five deaths in one family from diphtheria in spite of the best advice that could be procured. Dr Jamieson's cases seemed to be diphtheritic, and if the treatment he advocated be found effectual in checking some forms of that disease, he will have conferred a lasting benefit on the profession. As an example of the difficulty in diagnosis, he might mention that he had lately under his care six cases of sore throat in one family, some of these with decided diphtheritic deposit over the tonsils; while some of the other cases were so slight that they might, under other circumstances, have been passed over as nothing special. His usual treatment was Condy's fluid pure applied locally, and chlorate of potash with steel drops internally, and in many cases the recovery was very rapid. In other instances no effect was produced in averting the fatal result. He thought one of the great advantages of the boro-glyceride was its non-irritating properties, for patients would much more readily submit to its application. Condy's fluid was similar in that respect, the only objection to it being its dark colour.

Dr Coldstream said it seemed to him that diphtheria was a term they should be very careful about using when in attendance on a family, because it threw every one into a panic, and isolation had to be practised. Except as regards the intensity of the symptoms, it seemed to him that Dr Jamieson's cases were at least similar to diphtheria. They had all swelling and tenderness of the cervical and sublingual glands. There were symptoms of blood-poisoning, as shown by the albuminuria, and nearly all had some membranous exudation over the tonsils and uvula. Had any of them proved fatal they would undoubtedly have been considered cases of diphtheria. Such cases he thought they should class as membranous sore throat, and reserve the term diphtheria for cases with great depression, high fever, blood-poisoning, and abundant, sloughy exudation. He was interested to hear of the instantaneous relief of pain given by the boro-glyceride. He had got the same satisfactory result from the use of the flowers of sulphur, which he dusted over the parts, as recommended some years ago in a paper by Erskine Stuart in *The Practitioner*. His first trial of it proved so efficacious that he had used it regularly since.

Dr Sinclair called attention to Dr Jamieson's condemnation of the use of gargles in sore throat, as not giving the ulcerated surfaces the rest they required for healing. That was quite his experience. Gargles were once highly lauded. They assisted, it was said, in expelling the false membrane. He did not think they did. They were productive of more harm than good. He thought they were much indebted to Dr Jamieson for bringing this before them.

Dr Allan Jamieson, in reply, thanked the Society for the kind way in which they had received his paper and pointed out what were undoubted weaknesses in it. As to the diagnosis, he thought it was very difficult to say what was diphtheria. If only fatal cases were to be called diphtheria, then none of his cases were so. He thought there were many grades in the disease. Dr Coldstream had brought out the points of diagnosis sufficiently, and he did not think that he needed to repeat them. He was, however, ready to admit that it was a mistake to call them cases of "diphtheritic sore throat." He should have said simply diphtheria.

II. *Mr Joseph Bell* read his paper on A COMPLICATED CASE OF INGUINAL HERNIA, which appears at page 502 of this Journal.

Dr Coldstream said he had had an opportunity of seeing this patient in Mr Bell's wards after the operation, and his progress was most satisfactory. He suffered from a complication fitted to try the anatomical knowledge and skill of any surgeon. A large portion of strangulated bowel, a considerable quantity of gangrenous omentum, an undescended testicle, and what was practically a hydrocele of the cord, occupied the same inguinal canal. He thought Mr Bell might well be congratulated on his treatment of the case.

THE BOSTON
SOCIETY FOR
MEDICAL
OBSERVATION

Part Fourth.

PERISCOPE.

MONTHLY RETROSPECT OF OBSTETRICS AND GYNÆCOLOGY.

By Angus Macdonald, M.D.

Puerperal Insanity is the subject of a short communication to the *Australian Medical Journal*, 15th June 1882, by Mr J. De Burgh Griffith. The author, after pointing out the special interest which cases of this disease cannot fail to occasion, as the patients are usually young women with important domestic and social duties devolving upon them, proceeds to state that the disease may assume the form of acute mania, of melancholia, or of dementia, and will be found to occur at three distinct periods, viz., during pregnancy, shortly after delivery, or during lactation; acute mania being usually met with shortly after delivery, and most commonly in unmarried women. Acute puerperal mania is often associated with well-marked febrile symptoms, the temperature running up to 103°–105°. Before these acute symptoms are developed the patient is usually sleepless and restless for many nights, during which her mind begins to wander and she appears frightened. It is during this premonitory stage that treatment is most effective. If the patient is carefully attended to, subsidence of the acute symptoms may be expected in the course of a week, and complete recovery usually takes place by the end of three months. Puerperal melancholia is met with both before and after delivery, but is most frequent during lactation, especially in the delicate and underfed. These patients refuse food and frequently exhibit suicidal tendencies. A painful feature of this disease is the dislike frequently manifested towards the patients' nearest and dearest friends. This often renders removal to an asylum an important element of cure, though the author believes, with the aid of an *experienced* attendant, that the majority of cases may be satisfactorily treated at their own homes. In acute puerperal mania the first and most important step is to procure sleep, which may be done with chloral in full dose. A warm bath and some aperient will much assist the operation of the sedative. In puerperal melancholia the refusal of food so frequently present must be overcome by tact and skill. Tonics and feeding are our sheet-anchor. In conclusion, the author says there are no cases requiring such an exercise of patience and skill as those of puerperal insanity, and there are hardly any others which afford us such a retrospect of pleasure and satisfaction if we can bring them to a successful issue.

PUNCTURED WOUND OF THE PREGNANT UTERUS; PARTIAL ESCAPE OF THE FŒTUS INTO THE ABDOMINAL CAVITY; RETENTION OF THE FŒTUS FIVE YEARS.—Under the above title, Dr B. F. Baer of Philadelphia records in *Philadelphia Medical News*, 8th July 1882, the history of a patient who, by a fall on a chair, had sustained a rupture of the uterus, as also of the entire tissues forming the anterior abdominal wall, except the skin. The fœtus escaped partially through the abdominal rent, and lived in that position for three days. There were symptoms of peritonitis at first, but these disappeared in the course of a week. At the time of the accident the patient was under the care of Dr Keogh, Killaloe, Ireland, who correctly diagnosed the nature of the injury. The patient enjoyed good health, and was capable of severe and sustained exertion, till on emigrating to America two years after the accident she fell a victim to an attack of typho-malarial fever. In consequence of the weakness induced by this fever, the abdominal walls became so relaxed as to permit of a troublesome intestinal hernia through the weakened part of the abdomen, for which she applied for medical relief. She was then found to be further suffering from the results of absorption from the fœtal mass, which had begun to decompose. After consultation with Dr Goodell, the patient was prevailed upon to give her sanction for removal of the foreign mass. This was attempted, and with much difficulty ultimately effected *per vias naturales* by dilatation of the cervix partly with tents and partly by incision. Much difficulty was occasioned by the firm manner in which a great portion of the decomposing fœtus was grasped in the uterine wall. The patient ultimately recovered, though she had pyæmic abscesses, one of which was post-ocular and involved the loss of an eye.

In the same Journal for June 3, 1882, Dr Goodell publishes an interesting clinical lecture on VEGETATIONS OF THE ENDOMETRIUM, in which he advocates strongly the advantage in a clinical view of the use of the curette. He recommends, however, a blunt curette made of steel, believing that the copper curette is too flexible to be of real benefit, whereas, on the other hand, Simon's sharp steel curette is apt to injure the healthy mucous membrane in the hands of an unskilful operator. From prolonged experience, Dr Goodell does not rely much upon microscopic examination of the vegetations thus scraped off, as he has so frequently found the best microscopical observers at fault in their deductions regarding this matter. He depends entirely on clinical experience regarding their nature. As to the nature of those vegetations, Dr Goodell states that they may be—1st, *Fungous degeneration of the endometrium*, which is a benign lesion due simply to over-nutrition, and consists merely of an hypertrophy of the existing elements. [We presume he refers here to the endometritis fungosa hyperplastica of Olshausen. —A. M.] This disease Dr Goodell believes to be caused by anything that leads to undue nutritive action in the endometrium, such as retroflexion, retroversion, interstitial fibroids, submucous fibroids, laceration of the cervix, single life, and sterility natural or enforced. 2nd, *Villous degeneration of the endometrium*. This is a papillary growth, and may be benign or malignant, but Dr Goodell does not think the microscope can determine which. 3rd, *Sarcomatous degeneration of the endometrium*, which the author believes can usually be determined by the microscope and proves invariably fatal. Dr Goodell then proceeds to state that cancer of the cervix is very rarely found in women who have not borne children, whilst malignant disease of the endometrium or of the womb proper are very generally found in women who are sterile or in old maids. Dr Goodell adopts as an explanation of this fact Emmet's view, that cancer of the cervix is usually the result of cervical tears.

MONTHLY REPORT ON THE PROGRESS OF THERAPEUTICS.

By WILLIAM CRAIG, M.D., F.R.S.E., Lecturer on Materia Medica, Edinburgh School of Medicine, etc., etc.

IODINE IN MALARIA.—Dr R. B. Morison reports, in *Maryland Medical Journal*, 250 cases of malaria treated with tincture of iodine, in fifteen-minim doses, largely diluted, a quarter hour before meals. His cases show an even more favourable result than where cinchonidia is employed, and he states that iodine is now the routine treatment in all cases of acute malaria coming to the dispensary. Similar observations are reported in the *Indian Medical Gazette* for January by Buboo Brojendry Nath Bamergee at the meeting of the Calcutta Medical Society. He states that since 1878 he has made large use of this method of treatment, and in 1879 published in the *Calcutta Medical News* that he had cured ninety per cent. of 500 cases. Since then, however, he has been led to distrust the reliability of his results, and believes that many of his earlier trials were made in cases which recover spontaneously, while others of these cases last, even under no treatment, only one day. Under such circumstances, any drug will appear to act like magic His present belief is that iodine will prove serviceable in about half the cases. The same author also reports cases in which burnt alum appeared to be of service.—*New Remedies*, October 1882.

ANTISEPTIC PROPERTIES OF OXYGENATED WATER.—At the Hospital, St Louis, M. Péan has been making experiments on the antiseptic properties of oxygenated water. This water was specially prepared, and contained from two to twelve times its volume of oxygen. Externally, the liquid was used in the dressing of large wounds and ulcerations of every kind; and having given good results, it was used as the only dressing after major operations, such as amputations of the arm, leg, and thigh, and in the ablation of large tumours. During the operation a spray of the same liquid was playing on the wounds. Under the influence of these applications the wounds showed a favourable tendency to unite by first intention, and in the case of chronic ulcers cicatrization was observed to be effected more rapidly than with any other dressing. At the same time, to patients who had been treated by other means, and who were threatened with septicæmia, the oxygen water was given internally with the most salutary results. M. Péan believes that this agent is superior to phenic acid, and it has also the advantage of being devoid of any obnoxious odour, nor does it possess any toxic properties.—*New Remedies*, October 1882.

ON THE PHYSIOLOGICAL ACTION OF MANACÁ, by P. E. BREWER, M.D., Ph.D. Norwich, Conn.—Manacá, a Brazilian plant, has recently been presented to us for study, it having a reputation for power, but no careful indications for administration, or hints of its scope of action. With the desire and purpose of solving the latter, I enter upon this series of experimental inquiry :—

Effects on Man.—The writer took ʒj. of manacá fluid extract on a full stomach. The taste was not unpleasant, and soon left the mouth. Feeling no effect, in twenty minutes he took ʒss. In ten minutes I felt very restless, much as the animals appear. It was impossible to sit contented and read or write. I felt like exercise, so I walked one mile and a half. Before I had completed the last half mile my leg felt heavy and tired, unusually so, and I was actually compelled to frequently stop and rest. On arriving home I laid upon a sofa for perhaps thirty minutes, feeling a peculiar tired sensation, not that of inordinate exercise, but more the sensation of laziness, as if it were an effort to move. In two hours from the last dose I felt perfectly well again. Towards night the saliva and urine were more than normally abundant, and at night I perspired quite freely. On the next day the bowels moved as if from a laxative—semi-fluid, and containing a large quantity of greenish matter which I regarded as bile. The pulse and respiration were unaffected, the pupils, hearing, tactile sensation, and reflex action perfectly normal.

Résumé.—In the foregoing experimental inquiry we have ascertained—1st, That there is no effect upon the brain; 2nd, That the special senses are uninfluenced; 3rd, The spinal cord is the chief field of action wherein (*a*) the motor centres are stimulated, and (*b*) the reflex function is abolished in the full physiological effect; 4th, The cardiac reflex centre is depressed; 5th, The respiratory reflex centre is depressed; 6th, The glands are stimulated, especially the salivary, gastric, intestinal, and cutaneous, the liver, and the kidney; 7th, The duration of action is about three and one-half hours; 8th, The infusion prepared from the ground root contains the virtues of the drug.—*Therapeutic Gazette*, September 1882.

MANACÁ IN RHEUMATISM, by W. J. Pepper, M.D., Connersville, I.—As a remedy in rheumatism this drug has proven specially efficacious in my hands, but more notably in a case of inflammatory rheumatism. Mrs ——, æt. 35, had been bed ridden for three months with inflammatory rheumatism. All the various remedies, such as guaiacum, salicylic acid, potassium bromide, hypodermic injections of morphia, etc., had been used previous to my being called in, without success. I immediately resorted to the manacá, as in the following prescription :—℞ Fluid ext. manacá, gtt. 40; syrup simp., q. s. ft. ℥j. M. Ft. mistura. Sig. teaspoonful every three hours until the peculiar effects of the drug are produced. These peculiar effects are a sense of tightness and fulness about the head, with profuse perspiration. The first prescription produced none of the special symptoms, so I renewed the medicine, doubling the dose of manacá thus :—℞ Fluid extract manacá, gtt. 80; syrup simp., q. s. ft.

℥j. M. Ft. mist. Sig. teaspoonful every three hours until the peculiar effects of the drug are produced. This prescription sufficed; the special symptoms of the drug were produced, and the patient recovered within a week. The manacá, after the special symptoms had been produced, was continued in ten-drop doses three times a day for a week. It seemed as if all symptoms of rheumatism disappeared directly after the peculiar effects of the drug manifested themselves by head symptoms, etc., and recovery was almost immediate; but for reasons of safety I continued to administer it in ten-drop doses three times a day for a week, after which time all symptoms of her peculiar disease had disappeared. I have always found, in administering the drug manacá, that it was necessary to have the peculiar effects of the drug, as exhibited by head symptoms, etc., show before any curative effect was experienced.—*The Therapeutic Gazette*, September 1882.

CASCARA SAGRADA, by H. Stieren, M.D., Mason, W., Va.—Generally not over-sanguine in my expectations of the sometimes highly extolled effects of new drugs, I yet saw so much praise bestowed on cascara sagrada (*Rhamnus purshiana*) that last winter I concluded to give the fluid extract, as obtained from Parke, Davis, & Co., a thorough trial. Mrs K., about 47 years old, whom I had known for nearly 14 years, has presented about the worst case of habitual costiveness that has occurred to me in a more than 28 years' extensive practice. Neither the most diversified purgatives and even drastics, nor belladonna and nux vomica, could afford more than a slight temporary relief, and even then she had often to resort to doses much larger than directed by me. So I prescribed for her fluid extract cascara sagrada, tinct. rhei. simpl., each 1 oz., a teaspoonful to be taken night and morning. The first dose she took on a Monday night before retiring, the second on Tuesday morning, without any effect during Tuesday, when she took another teaspoonful on Tuesday night and one on Wednesday morning. By about ten o'clock A.M. on the same day she had the first copious passage, followed by two more during the day, feeling, as she informed me, better and easier than she had for many years. For the balance of that week she had no more need of the medicine, enjoying an easy passage every morning till Sunday, when she was obliged to take another dose at night, with so much benefit as not to necessitate any more the next morning. About seven months have elapsed since, but the woman is so far regular now that, should a temporary constipation of a few days recur, one teaspoonful of the above mixture at bedtime will remedy instanter. Cascara now boasts of an important place in my materia medica.—*The Therapeutic Gazette*, September 1882.

AMYL NITRITE AS A REMEDY FOR AGUE.—Dr Saunders, of Indore, India, gives nitrite of amyl mixed with an equal amount of oil of coriander, to render it less volatile and mask its taste. Four drops of this are put on a piece of lint, and from it is freely inhaled by a patient in the cold stage. Following the flushing of the face which occurs, perspiration takes place and the cold stage is at an end. —*New Remedies*, October 1882.

(Translated by R. D'Ary, M.D., Romeo, Mich). **CONVALLARIÆ MAJALIS FLORES.**—Dr Kalmyk of Russia has tried the tincture of Convallaria majalis flowers, in the strength of ʒj. to ℥vi. of menstruum, on five subjects, of which he closely observed three. One was a case of insufficiency of the mitral valves and cirrhosis of the liver in a woman 24 years old. The second patient was a man suffering similarly. The third also was a man suffering from chronic nephritis. The results obtained are summarized thus:—1. The heart's action becomes more quiet and energetic, the pulse becomes even, full and slower, the dyspnœa disappears. The remedy does not seem to have any injurious influence on the heart. Two of the patients had taken altogether eleven drachms without harm. 2. The quantity of urine is promptly and very much increased, the dropsical effusion disappearing very rapidly. The maximum of increase of the urine was 2250 cubic centimeters in the case of nephritis, and in the other two, 1700 and 2000 cc. in each. The effect of the remedy in ascites was, in the doctor's experience, also satisfactory.—Vratch, *The Therapeutic Gazette*, July 1882.

PERISCOPE OF OTOLOGY.

By Dr KIRK DUNCANSON, Surgeon to the Ear Dispensary, 6 Cambridge Street; Assistant-Surgeon, Eye Infirmary; Lecturer on Diseases of the Ear, Edinburgh School of Medicine.

EARACHE.—In the American Medical Association, Dr Jacobi remarked that closing the mouths of infants and children and simply blowing into the nose is often a very valuable method of relieving severe earache, and that in a number of cases he had obtained most excellent results from this procedure, the cause of the trouble probably being a catarrhal affection of the Eustachian tube.

ATROPIA FOR EARACHE.—The most effectual treatment, and the one which has stood the test of years, says Dr A. D. Williams in the *American Chemists' and Druggists' Bulletin*, is the local application of a solution of the sulphate of atropia. Not a single case but has yielded at once. The solution is to be simply dropped into the painful ear, and allowed to remain there from ten to fifteen minutes. Then it is made to run out by turning the head over, then being wiped with a dry rag. The solution may be warmed, to prevent shock. From three to five drops should be used at a time. The strength of the solution must vary according to the age of the child—under three years, one grain to the ounce, and over ten years, four grains to the ounce of water. In grown persons almost any strength may be used. All ages will bear a stronger solution in the ear than in the eye. The application should be repeated as often as may be necessary. Usually a few applications will stop the pain. In acute suppurative inflammation of the middle ear and acute inflammation of the external meatus [Which, in our experience, atropia tends to produce.—J. J. K. D.], atropia will only slightly palliate the suffering, but in the returning nocturnal earaches of children it is practically a specific. [The application of the remedy proposed by Dr Jacobi, if the nostrils are free and clean, and the instillation of pure warm water into the external meatus, will do more good, and certainly much less harm, than was our experience with dropping in solutions of atropia into the sound ext. aud. meat. several years since. Where the atropia really is required, the solution ought to be made aseptic with the addition of a little boracic acid and pure glycerine or boro-glycerine.—J. J. K. D.]

SPILLMAN AND SCHMITT ON TUMOURS OF THE FOURTH VENTRICLE. —MM. Spillman and Schmitt, both Professors of Clinical Medicine at the Faculty of Nancy, publish in the *Archives Générales de Médecine*, August 1882, a paper founded on one hitherto unreported case and on thirty cases already published. Tumours of the fourth ventricle vary extremely in symptoms. Diabetes mellitus or insipidus is the only symptom which appears to be directly in relation with the ventricular lesion. Diagnosis is impossible unless there be, besides diabetes, the usual manifestations of a cerebral tumour combined with symptoms of disease of the medulla or pons varolii, such as internal strabismus, dysphagia, deafness, and paroxysmal paralysis; and frequent vomiting, without cerebellar symptoms, must be present.—*British Medical Journal*, October 28, 1882.

A PLUM-KERNEL IN THE EAR FOR 33 YEARS (*Un noyau de prune ayant séjourné 33 ans dans l'oreille*), by Dr Ducan (*Revue mensuelle de laryngologie*, etc., 1882, No. 7).—A man 39 years of age suffered for three days from pain in his ear. His wife, in attempting to clean his ear, caused him so much pain that the patient at once consulted his doctor. At the same time he now remembered having stuck a plum-kernel into his ear when he was six years old, and as he experienced no pain, he held his tongue about it at home in case he should be punished. By syringing out the ear with lukewarm water with a Ménière's syringe, a plum-kernel was brought to light. The author remarks that it is frequently much better to allow a foreign body to remain in the external meatus than to attempt to remove it by imprudent and barbarous manipulations. In this case he commends the preferableness of syringing with tepid water to all other measures.—*Monatsschrift für Ohrenheilkunde*, No. 10, 1882.

ORDER OF THE WUERTTEMBERG CONSISTORIUM (BOARD OF EDUCATION), ADDRESSED TO ALL SCHOOL INSPECTORS AND HEADS OF

SCHOOLS, REGARDING DEFECTS OF HEARING AMONGST THEIR PUPILS.—As it sometimes happens that pupils suffer from defects of hearing without its being known to them or to their friends, and as not infrequently the inattention of the pupil arises from some weakness of his hearing power, teachers are hereby directed to inquire amongst his pupils, and specially amongst those who give occasion for complaints through their inattention, whether or not their hearing is defective. If, after minute and continued observation, a greater or less degree of difficulty in hearing become apparent in the pupil, not only must the latter be placed always in immediate proximity to the teacher during lessons, but his parents must be informed of the weakness, and, if possible, induced to consult an experienced physician. The school inspectors will also, in the course of their examination of schools, direct particular attention to pupils of defective hearing, and make the necessary arrangements regarding them.—*Monatsschrift für Ohrenheilkunde*, No. 10, 1882.

THE BOSTON
SOCIETY FOR
MEDICAL
OBSERVATION

OCCASIONAL PERISCOPE OF DERMATOL[illegible]

By W. ALLAN JAMIESON, M.D., F.R.C.P., Lecturer on Dis[illegible]
Edinburgh School of Medicine.

FILARIA SANGUINIS AND CHYLURIA.—Dr Havelburg, of Santos in Brazil, records a case of chyluria in which some remarkable points were made out. The patient, a married woman, born in Germany, went when 18 to Brazil, and was 32 when she came under observation. On 7th September 1881 she voided chylous urine for the first time. Previous to this date, for a considerable time, she experienced a dull pain in the lower part of the abdomen on the left side, which at times compelled her, when sitting, to assume the erect position. On the day above mentioned, while lifting a tub, she felt a sudden "crack" and the painful sensation at once ceased. When, directly afterwards, she passed water, she observed that it was white in colour, and it continued so ever after. The left side of the abdomen was tender on pressure. A portion of the skin over the epigastrium was rugose, and resembled elephantiasis. She felt here the sensation of internal tension, increased by pressure from without. The urine, when fresh, was vainly examined for filariæ, but they were found in the deposit of that which had stood three days. The urethra was so wide that a digital examination of the bladder could be easily accomplished, and in this way a catheter was passed into the left ureter and left in for two hours and a half. The urine which escaped from this was quite normal, and contained neither albumen nor fat, which were present in the urine voided or drawn from the bladder itself, and gave it its milky appearance. From this he concluded that the chylous urine was not formed in the kidneys, but that the milky fluid was poured directly into the bladder, and mingled there with the urine. No filariæ were found in the blood, till, having learned of Dr J. Mackenzie's observations with regard to the periodicity observed in their appearance and disappearance, examination was made at night. Then it was found that in this case the filariæ began to appear about 9 P.M., by 11 they had attained their maximum, at 1 A.M. they had much diminished in number, and at 2 were no longer to be seen. Once only a filaria, motionless, was seen in the blood in the daytime. The patient died on the 8th March 1882. Twice during the time she was under observation she passed chylous stools. A complete autopsy could not be made, but a partial one of the abdomen was obtained. When the peritoneum was exposed on the left side, a large sac with chylous contents became visible. This had many projections on its surface. There were many enlarged lymphatic glands. The left side of the upper wall of the bladder lay embedded in this sac-like outgrowth, and when the enlarged bladder was opened the upper wall was seen to be perforated, and a milky fluid even then oozed out of the aperture into the bladder. In the right side of the abdomen there was nothing remarkable. Havelburg thinks that a thrombosis caused an obstruction in the cœliac duct, and this caused first dilatation, and finally sacculation, of the lymphatics leading into it. The works accessible to him not affording him information as to the relation of the lymph vessels of the bladder to the general lymphatic system, he suggests that these possibly empty themselves into the cœliac duct also. The "crack" felt by the patient was certainly the sensation experienced when the distended sac burst into the bladder. A similar rupture into the bowel led to the chylous stools. Should these openings temporarily heal up and again reopen, an intermittent chyluria will result. From obstruction in the lymphatic system of certain parts of the skin, irregularities of the surface arise. This form of elephantiasis is often associated with chyluria, and traces of it existed on the abdomen in the case under consideration. "A plant belonging to the Synantheria, *Bidens filosa*, called here Picaõ, has a popular reputation as a valuable remedy against chyluria. After its use intermissions in the disease are said to occur."—*Virchow's Archiv*, August 1882.

ON CHRONIC SKIN DISEASES TREATED BY THE WATERS OF AIX-LA-CHAPELLE.—Schumacher, jun., states his experience of these waters as favourable in various forms of skin disease. Many persons, he says, in whom local measures have failed to effect a cure after many years, have finally been thoroughly cured by using the hot baths and submitting to the constitutional treatment as practised at Aix-la-Chapelle. It is of much importance that patients should reside near the baths for four to six weeks at least, or, if possible, till every sign of disease has disappeared.

Treatment here does not protect against recurrences, but these, when they occur, are said to be milder. Chronic eczema is satisfactorily treated here. The itching is lessened; while widely spread eczema, which would not admit of any local application, has yielded to the continued use of the baths. Pustular diseases of the skin, especially acne scrofulosorum and acne cachecticorum, as well as boils. The former diseases require often a residence of months; the latter are cured rapidly and without pain, and a return rendered doubtful. Cases of psoriasis in which the ages of the patients are from ten to twenty, and in whom there is no taint of hereditary disease, are most hopeful with regard to a permanent cure. In general a repetition of treatment is necessary in a year's time in consequence of the disease having recurred in a milder form. The bathing treatment here is recommended, not only because it rapidly cures all outward manifestations, but because it strengthens the system and eradicates the tendency to psoriasis. Prurigo and pruritus are both favourably influenced, bnt the latter is often only temporarily relieved, not cured.—*Archives of Dermatology,* July 1882.

ON THE RESULTS OBTAINED FROM THE EXCISION OF THE PRIMARY SYPHILITIC SORE.—Jullien of Paris concludes, from the results of six cases (*Archives of Dermatology,* July 1882), that—I. The excision of the chancre causes no local disorder, and hastens the disappearance of the ulceration. II. Under certain circumstances with which we are not yet acquainted, it suppresses all manifestations of syphilis. III. Under other conditions it diminishes to such a degree the effects of the poison that it seems to give the patients the benefit of a real vaccination. Bumm of Wurtzburg (*Vierteljahresschrift für Dermatologie und Syphilis,* 2 Heft, 1882) treats the same subject in an exhaustive manner, and arrives at much the same conclusions. He thinks that the syphilitic virus becomes stored in the lymphatic glands, and from these it is from time to time set free, producing fresh manifestations in the system. Finding, in the experiments, that very uncertain results attended the excision of the chancre, the chain of indurated lymphatic glands was extirpated also, but with no more certainly satisfactory results. This, indeed, was scarcely to be expected, as, whether the view be accepted or not that the induration of the chancre is the proof that systemic infection has taken place, or, again, that the virus creeps, as it were, from gland to gland till at length the organism is permeated more or less completely, it is certain that when the glands have become involved the systemic infection must be nearer than previous to their enlargement. One case is peculiar. A prostitute, aged 17, when put in prison, exhibited no venereal symptoms. After being four weeks there a vaginal discharge was present, papillary growths on the vulva and round the anus, and at the edge of the left labium a sharply defined induration the size of a bean, bearing little secretion on its surface. The hardness and varnish-like gloss were extremely characteristic. The lymphatic glands were nowhere enlarged. This was excised, and a microscopic examination by Ziegler confirmed the diagnosis. Fourteen months afterwards there had been no sign of constitutional syphilis. She was then inoculated with the secretion of a hard chancre. Ten days later an ulcer appeared, which in time became indurated. A second inoculation was performed 23 days after the first. The lymphatic glands became implicated in due course, and six weeks after the second inoculation a roseolar rash appeared. If the indurated ulcer excised from the labium was really a hard chancre, this case goes to prove the correctness of Jullien's conclusions.

PERISCOPE OF STATE MEDICINE.

By James Allan Gray, M.D. Edin., F.R.C.P.E.

The Condition of the Atmosphere in Rooms warmed by Hot-Air Stoves (Dr Rabot).—M. Rabot describes the movable calorifer, or hot-air stove, of Dr Godefroy of Versailles, and gives the results of his analysis of the air of rooms warmed respectively by this and by the ordinary American stove. Dr Godefroy's apparatus consists of a stove which has no communication with the air of the apartment in which it stands, but which is connected with the chimney by means of two horizontal pipes, one of which brings in the air to the hearth of the stove, and the other carries off the smoke. Two currents are thus formed in the chimney, an upcast one carrying off the warmed air and impurities, and a downcast bringing in cold air from without. M. Rabot then gives the following details from a report read by him to the Académie des Sciences:—"1. The movable hot-air stove called the American, was charged with 10 kilogrammes of coke, and acted with little draught for two hours (little draught ought to be regarded as the normal mode of working of these stoves). The apparatus used in the analysis was that of MM. Dumas and Boussingault, consisting of a series of U tubes for absorbing water and carbonic acid, with Liebig's tubes for the absorption of carbonic oxide and sulphuretted hydrogen. A graduated aspirator enabled the quantity of air passed through the apparatus to be accurately estimated. 1000 litres of air at 15° C. and 760 mm. of pressure (=59° F. and 29·8 inches of pressure) gave the following results:—

Carbonic acid, by weight, .	1 gr. 20 c.	
„ „ by volume, .		639 c.c.
Carbonic oxide, . . .	0 00.	
Sulphuretted hydrogen, by weight,	0 0229.	
„ „ by volume,		15 c.c.

2. The place, having been completely aired during twenty-four hours, was again shut afresh, and warmed by means of Godefroy's stove. Another series of tubes were set up in the same circumstances as the former. The stove, having been charged with the same quantity of coke of the same supply, acted with little draught during the same time; and 1000 litres of air at 15° C. and 760 mm. of pressure gave—

Carbonic acid, by weight,	0 gr.	30 c.	
„ „ by volume,			159·8 c.c.
Sulphuretted hydrogen,	0	00.	
Carbonic oxide, .	0	00.	

The ordinary movable or American stove, in the normal condition of its action, diffuses a part of the products of combustion in the apartment. With the modification of M. Godefroy the atmosphere of the room has only the amount of carbonic acid normally found in the air. With the American stove not only is the proportion of carbonic acid quadrupled, but sulphuretted hydrogen is also present. It is probable that if the trial had been made for a longer time, and the American stove had been set on at first with a full draught, and then with a little draught, traces of carbonic oxide would have been found, but no sulphuretted hydrogen, owing to the latter gas having been burned. The calorifer, being set on from the first with a small draught, burns quietly, only a part of the carbon undergoing combustion, and warming the rest. It is then that traces of sulphur compounds are disengaged. With full draught, on the contrary, the temperature is raised, and the compounds of sulphur, when they exist, burn completely; but if one turns the key to lessen the draught, the supply of oxygen is diminished, and carbonic oxide becomes formed. It is this which constitutes the danger of the American stoves. The modification adapted to this apparatus by Dr Godefroy appears thus very successful from a hygienic point of view; and analysis demonstrates its excellent results."—*Annales d'Hygiène*, January 1882.

POISONING BY ACONITIA (Dr Tresling).—A medical man, Dr M., prescribed for a patient a 0·2 per cent. solution of nitrate of aconitia, of which from 20 to 60 drops were to be taken every hour. The patient took 5 drops on the first day. On the following day, after taking 20 drops, he experienced a burning sensation in his mouth and throat, and almost immediately vomited. He repeated the same dose on three occasions, but vomited after each. At length, in the evening, he swallowed 20 drops more, which he retained, but all night he felt oppressed and intensely cold, although he experienced internally a burning feeling. To show that these symptoms could not be ascribed to the solution of aconitia, Dr M. swallowed from 50 to 60 drops of it. The toxic effects began to show themselves at the end of a quarter of an hour. Four hours later Tresling found Dr M. pale, with pulse small and irregular, but not quickened, with skin cold, and pupils contracted. He experienced a sensation of burning in the mouth, and of constriction from the throat to the abdomen. He complained of præcordial distress and of heaviness and feebleness of his extremities, especially of his legs. The pupils dilated suddenly and vision was lost, but it returned on the pupils becoming again contracted. Stimulation of the pharynx produced vomiting, which afterwards occurred spontaneously. The vomited matters consisted of the *débris* of ingesta coloured red. Soon after this convulsions and snoring respiration appeared. Then M. complained of deafness and buzzing seated alternately in either ear. After a subcutaneous injection of ether the pupils became again dilated and vision was lost; and again there was vomiting, with convulsions violent and prolonged. A second injection of ether was given, but the patient could not be recalled to consciousness, and the dilated pupils refused to react to light. The respiration became slow and laborious, and, in spite of the employment of electricity, became more and more difficult. The heart failed gradually, and M. died five hours after taking the poison. At the autopsy there was found great pallor of skin and muscles, while the internal organs were greatly congested, the intestines being notably hyperæmic, excepting the colon and rectum, which, like the bladder, were in an anæmic condition. The lungs, which were adherent to the thoracic wall, were very much congested; they contained both old and recent tubercles and a small cavity. The heart was in diastole; the right cavities contained a little fluid blood. The meningeal vessels were distended, and here and there some subarachnoid effusion was to be seen. In the ventricles was found a sero-sanguinolent fluid, and on the choroid plexus an exudation of blood. The blood was everywhere fluid, and of a bright cherry-red colour.—*Schmidt's Jahrbücher*, B. 189, No. 2, 1882, quoted in *Annales d'Hygiène* for January 1882.

DISTRIBUTION OF ARSENIC IN THE VARIOUS ORGANS AFTER POISONING BY ARSENICAL COMPOUNDS.—Professor Ludwig, in studying this vexed question, employed the organs of persons poisoned by this drug, and of dogs of 40 pounds weight which he had first submitted to acute or chronic poisoning. In the case of a man who had died from the administration of arsenic, Ludwig analyzed the liver, brain, and kidney, 600 grammes of muscle from the thigh, and 255 grammes of the tibia and fibula, and arrived at the following results:—

100	grammes of	liver	contained	0·00338	grammes	of arsenic.
100	„	brain	„	0·00004	„	„
100	„	kidney	„	0·00515	„	„
100	„	muscle	„	0·00012	„	„

which means that the proportion of arsenic contained in the same weight of brain, liver, kidney, and muscle is represented by 1, 84, 129, and 3. The principal results obtained by the analysis of the organs of men and animals can thus be summarized. In poisoning, acute or chronic, arsenic ought to be found in the bones. If the doses employed have not been fatal, arsenic is to be found in the bones long after the administration of the poison has been stopped. In the case of a dog killed twenty-seven days after the last dose had been given, arsenic was recovered from the bones; but in the case of another dog killed at the end of forty days none could be so obtained, although the liver yet contained a notable quantity of the poison. It is a mistake on Sonnenschein's part to consider that the search for arsenic in the bones is very difficult. The brain contains but a small proportion of arsenic either in acute or chronic poisoning; the liver, on the contrary, always contains a very large proportion, as in like manner do the kidneys, which in acute cases are held to contain more than the liver. In the muscles there is but little found, but always more than in the brain. In chronic poisoning, where recovery takes place, it is the liver which longest retains arsenic after its administration has been stopped. In the case of a dog killed forty days after taking the last dose, a larger proportion of arsenic was found in the liver than in the brain, while the bones and muscles did not contain more than a trace. The assertion of Scolosuhboff, who maintained that the brain was the organ in which arsenic accumulated in cases of acute poisoning, is certainly erroneous.—*Schmidt's Jahrbücher*, B. 189, No. 3, quoted in *Annales d'Hygiène*, January 1882.

CHRONIC POISONING BY ARSENIC.—MM. O. Caillol de Poncy and Ch. Livon, in a paper on this subject, after remarking on the improvement in health and condition noticeable at first, and the subsequent diarrhœa, debility, and death, occurring in animals subjected for a long time to the action of arsenic in small doses, call attention to the post-mortem appearances especially of the lungs and mesenteric glands. At the autopsy all the muscles, including the heart, are extremely pale. The liver, lungs, and kidneys present to the naked eye all the characters of fatty degeneration, and, in particular, the mesenteric glands are much hypertrophied and fattily degenerated. MM. Cornil and Brault have already noted the fatty degeneration of the liver, lungs, and kidneys in acute poisoning, but nothing has yet been said concerning the mesenteric glands. In the *lungs* the authors have not found anything really altered except the alveolar epithelial cells, which are in complete fatty degeneration. Certain alveoli are completely filled with degenerated cells, which end by entirely blocking up the alveolus, and at length the whole pulmonary lobule. It is this which explains the whitish islands seen on the surface and in the interior of the lungs. *Mesenteric Glands.*—On opening the abdomen of an animal which has succumbed to chronic poisoning by arsenic, these glands appear like great yellowish-white masses, which to the naked eye have a caseous aspect. On a more extended examination of the surface, and by the aid of the usual reagents, it is easy to see that the peripheral portion, especially the follicular region, is in certain parts completely invaded by fatty degeneration. This degeneration is not limited to the follicles, but invades the gland in large patches both peripherally and centrally. The degenerated parts are full of large cells, granular and fatty, as shown by osmic acid. Here, then, there takes place a process similar to that which occurs in the lung. Under the influence of small and successive doses of arsenic, the endothelial cells which the gland contains undergo fatty degeneration. This invades the most active part of the gland, the follicular quarter, which is that first attacked; then the degeneration, extending bit by bit, involves, if not the whole gland, at least the greater part of it.—*Ac. d. Sc.* 94, 1366, 1882, quoted in *Journal de Pharmacie*, Sept. 1882.

POISONING BY DAPHNE MEZEREON.—Dr Shaw records an instance of recovery from poisoning by the ordinary cultivated mezereon. The case occurred in the person of a little girl aged two and a half years, and the noticeable features were, the absence of pronounced gastric or intestinal symptoms, the presence of marked narcosis, and the recovery after the very large number of berries which had been eaten. The only gastric symptom mentioned is, that before being seen by the doctor the child had been sick, but had not vomited much. The emetic of sulphate of zinc given by way of treatment brought up merely some quantity of clear fluid. The narcosis, which was the most marked symptom of the case, and is by no means found in all cases, was here speedy and profound, coming on, apparently, within an hour of the time the fruit had been eaten, and continuing more or less for several hours. The number of berries swallowed must have been over fifty, as one-half of the first evacuation contained twenty-four seeds—each berry has but one oval seed—and a few more seeds were seen in a subsequent motion. Irritation of the mouth was noticed, "the lips looking as though they had been burnt, and the inside of the mouth being swollen;" but as this was only observed after the administration of the brandy and ammonia given for the coma, it is possible that the berries may not have been the cause of the irritation, although the plant is known to possess irritant properties, the berries being acrid, and the bark, when moistened and strapped to the skin, being a good rubefacient.—*British Medical Journal*, vol. ii. p. 521, 1882.

POISONING BY ATROPINE TREATED BY PILOCARPINE.—Dr Ludwig Tanzler communicates the two following cases of poisoning by the introduction of a solution of atropine into the eye:—1. A little girl of four years, affected with an interstitial keratitis of both eyes, was treated by the introduction of a one per cent. solution of atropine into the eyes. At the end of twelve days she had heat of the head, dryness and swelling of the throat, and a dry cough. The treatment was suspended, but soon afterwards resumed, the symptoms having disappeared rapidly. One morning the child awoke with a temperature of 40°·5 (104°·9 F.), and the pulse at 140, but regular. The skin presented here and there large patches of a vivid red colour, irregular in shape, not elevated, but disappearing on pressure, and not itching. The laryngeal mucous membrane was greatly injected and swollen; there were headache and dry cough This occurred on the 11th February. On the following day the pulse was still quicker than natural, and the temperature elevated. The eruption, which had become paler, reappeared in the evening, and again on the next day subsequent. The cure was gradual, and the atropine was resumed on the 18th. On the 6th March the child had again an elevation of temperature, an eruption on the face, irregular respiration, tonic and clonic convulsions, accompanied by loss of consciousness, ptosis of the left side, difficulty in swallowing, and suppression of urine. These symptoms disappeared completely at the end of two days. Subcutaneous injections of pilocarpine were employed. 2. A child of eight years was treated for two months by an injection into each eye of a three per cent. solution of atropine. In the beginning of June the child commenced to have embarrassment of speech, disorder of ideas, and confusion of words. When brought to the clinique on the 9th June it was found that the breast, the gluteal region, and the lower limbs were the seat of a scarlatiniform eruption, whilst on the neck and the upper limbs were some red spots, disappearing on pressure, and arranged in the form of small islets. At the same time excessive mydriasis, dryness of the pharynx, and burning thirst were present. The child looked idiotic, but was very much excited, and made continuous purposeless movements almost choreic in appearance; it recognised no one. Three successive injections of 0·02 grammes of pilocarpine ($\frac{3}{10}$ of a grain) were given to it, and then two others of 0·01 gramme ($\frac{3}{20}$ of a grain). After the last, the skin of the face and trunk became moist, but were again dry by the end of ten minutes. At length the child fell asleep, and on the following day was quite well. The intelligence was restored completely.—*Schmidt's Jahrbücher*, Band 193, No. 1, quoted in *Annales d'Hygiène* for September 1882.

Query.—Did the poisoning in these cases occur from the direct absorption of the atropine by the conjunctiva, or from its absorption by the skin denuded of cuticle by the artificial eczema which is sometimes induced by the long-continued employment of atropine as a mydriatic?

PTOMAINES, OR CADAVERIC ALKALOIDS, IN URINE, MILK, AND ANIMAL FLUIDS.—Of late a good deal of attention has been given to the condition of the urine in various wasting and infectious diseases, with the object of ascertaining whether there existed in it, in these circumstances, bodies of the nature of ptomaines. Selmi (*Reale Accad. dei Lincei*, Band v. pp. 174–243, quoted in the *Journal* *of Chemical Society of London*, 1882, p. 741) has extracted from the urine of a patient affected with progressive paralysis two poisonous bases, one resembling, but not identical with, nicotine, the other, found in much smaller quantity, having the odour of conine. From the urine of a patient suffering from rheumatic tetanus he obtained in very small quantity a poisonous base also resembling conine in odour; and from other urines other poisonous bases more or less indefinite in character. Bouchard (*Revue Médicale, Lancet*, 1882, vol. ii. p. 455) has in like manner extracted from the urine of cases of typhoid fever, "infectious pneumonia," and "infectious pleurisy," substances having all the characteristics of ptomaines, while from normal urine and from the urines of patients suffering from other diseases, such as pulmonary emphysema and valvular disease of the heart, no such substances could be got. On the other hand, however, it is well to remember that M. Pouchet (*Lancet*, 1882, vol. ii. p. 456) has affirmed that the presence of alkaloids may be constantly demonstrated in normal urine, and that milk (*Journal de Pharmacie*, Sept. 1882, p. 205) contains a substance the nature of which is ill defined, but which gives all the reactions of ptomaines; while Paterno and Spica (*Gazzetta*, 1882, *Journal of Chemical Society of London*, 1882, p. 741) has shown that fresh blood and fresh egg albumen give, with the usual reagents for alkaloids, exactly the reactions given by solutions containing ptomaines.

DETECTION OF THE PTOMAINES.—Mr H. Beckurts states that as yet he has not been able to discover any general reagent which will distinguish the ptomaines from vegetable toxic alkaloids. He gives as a general reaction for the detection of all alkaloids the following formula:—0·01 gram of the alkaloid is dissolved in 5 c.c. acidulated water, and to it are added two drops of 10 per cent. potassium ferricyanide solution and a drop of very dilute neutral ferric chloride. Morphia and colchicine act on this solution directly, the solution becoming dark blue from the reduction of the ferricyanide and consequent formation of Prussian blue. In the case of aconitine, brucine, conicine, digitaline, nicotine, strychnine, papaverine, narceine, codeine, and veratrine, the reaction is less powerful, the colour being at first green-blue, and precipitation occurring later. Atropine and neutral picrotocine give no result. The property supposed to be possessed by ptomaines of reducing potassium ferricyanide is, therefore, of no use as a means for their separation or detection.—*Arch. Pharm.* (3), 20, 104–106, quoted in the *Journal of Chemical Society of London*, Sept. 1882.

Note.—These results are in accordance with those obtained in the Medical Jurisprudence Laboratory, Edinburgh University, shortly after MM. Boutmy and Brourardel had pointed out this supposed property of the ptomaines, and had suggested the reduction of potassium ferricyanide as a test to distinguish these bodies from the toxic vegetable alkaloids (morphia and veratria excepted).

OCCASIONAL PERISCOPE OF SURGERY AND SURGICAL PATHOLOGY.

INTRA-ARTERIAL INFUSION OF ALKALINE SOLUTIONS IN ACUTE ANÆMIA.—The unsatisfactory results hitherto obtained by the ordinary methods of transfusion have gradually brought that operation into disrepute. Peritoneal transfusion, first proposed by Ponfick, and grounded theoretically on the known absorptive capacity of the peritoneum, does not seem to have proved satisfactory in practice. Perhaps in chronic anæmic conditions a use may still be found for peritoneal transfusion; but in acute cases, where the rapid introduction of large volumes of fluid into the blood-stream is a matter of necessity, the greatest conceivable capacity for absorption which the peritoneum may possess is far too small for the purpose. Recently Schwarz has obtained some favourable results by injecting dilute solutions of sodium chloride into the vascular system of highly anæmic animals. Subsequently Bischoff, in the case of a patient suffering from great loss of blood, injected a quantity of a similar solution with a successful result. He prefers intra-arterial to venous "infusion," on account of the difficulty experienced in finding the veins of a bloodless patient. During the whole operation no disquieting symptom was observed, except that for some time the left hand became blanched, but regained its normal hue after removal of the cannula. Dr Kümmel has also had a recent opportunity of testing this mode of treatment. The first patient was a man aged 28, on whom the operation of nephrectomy had been performed for advanced hydronephrosis. During this he had lost a large quantity of blood. Subcutaneous injections of ether and ol. camph., with alcohol internally, did not suffice to rouse the patient from a state of profound collapse. Transfusion of sodium chloride solution was resolved upon as *ultimum refugium*. The left radial artery was exposed and tied. Then, through a fine metallic cannula introduced into the vessel on the distal side of the ligature, 1000 grammes of a 0·6 per cent. solution of sodium chloride (rendered alkaline by the addition of 2 minims of sodium hydrate solution) were gradually passed, in the space of half an hour, into the blood-stream. The temperature of the solution was rather higher than that of the blood, viz., 30°-40° C., or 102°-103° Fahr. The pressure varied from ¾ m. to 1 m. Though during the progress of the injection the hand assumed a cadaverous hue, the removal of the cannula and the closure of the wound were soon followed by a restoration of the normal colour. The pulse at once became fuller, and fell from 132 to 108, whilst the respiration rate fell from 40 to 24 after about twenty minutes. The cheeks regained some colour. After a small dose of morphia —the patient was an opium-eater—a quiet sleep came on, which lasted till the next morning. Unfortunately the success was not lasting, for amyloid disease of the other kidney put a period to the patient's life on the following day. The second case was that of a woman, aged 61, with severe secondary hæmorrhage after excision of the knee-joint. As in the former case, the ordinary restoratives were tried and found useless. As the woman was evidently dying, 500 grammes of the warm sodium chloride solution were injected, under a pressure rather greater than that previously employed, into the left radial artery. The life of the patient was saved; but, unfortunately, some small bloodvessels of the thenar eminence gave way during the injection, allowing infiltration of the solution into the surrounding tissues to take place. On the following day the hand was gangrenous; and, emphysema spreading rapidly upwards, amputation of the arm was performed at the junction of the middle and lower thirds. The patient made a good recovery. Examination of the vessels of the amputated hand showed that the radial artery and palmar arches were quite free from clot, whilst the ulnar artery was occluded by a thrombus extending as far as the wrist-joint. Kümmel considers that the success of the operation in men and the lower animals justifies its further trial, and agrees with Schwarz in regarding it as a sure and speedy means of saving life in cases of excessive hæmorrhage.—Herrmann Kümmel, in *Centralb. f. Chirurg.*

ON INTRACRANIAL PRESSURE.—Naunyn and Schreiber have, since the autumn of 1879, conducted a number of experiments on various animals to demonstrate the effects produced when the intracranio-vertebral pressure is artificially increased. In the majority of instances the experiment was so arranged that cerebral pressure was produced by injecting fluid (a warmed ¾ per cent. solution of sodium chloride) direct into the subarachnoid space of the cauda equina. In this region a bent glass cannula was used, connected with a mercurial manometer on the one hand, and with a regulator, by which the flow of fluid could be controlled, on the other. A similar apparatus was connected with an air-tight steel cylinder screwed into the cranial vault. The disappearance of astonishing quantities of the injected fluid (as much as 400 ccm. in an hour and 44 minutes) was followed by a copious aqueo-mucous discharge from the nostrils, considerable and persistent *protrusio bulbi*, and chemosis. Pain was the first observable symptom. It was caused by tension of the dura mater and cerebral anæmia consequent on increased pressure. Loss of consciousness was at once produced by a sudden rise of pressure. Spasmodic movements, first clonic, but afterwards tonic in character, are among the earliest and most unvarying accompaniments of increased pressure. They begin, as a rule, at the moment of the rise or immediately thereafter; they disappear so long as the pressure remains equable, but are again set up by additional compression. They often appear when the pressure falls suddenly from a considerable height (+ 80 mm. Hg. or more) to zero.

Though at first due to cerebral anæmia, they seem also to partake of a reflex character, and then appear with the earliest manifestations of pain. True epileptic seizures are rare. Short and sharp compression (100 to 120 mm. Hg., 10–40 seconds long) caused slowing of the pulse, with high and abrupt curves, and obliteration of the respiration wave. A fall in the respiration rate is produced by pressures which have no influence on the pulse. In general, every increase of pressure diminishes, whilst every decrease augments, the respiration rate. The retardation of the pulse depends, as Leyden has already shown, on irritation of the central fibres of the vagus; for if the pneumogastric be divided, this symptom is absent even under the highest pressures. Atropin acts in a similar manner. Symptoms of cerebral compression only appear when the pressure reaches a certain limit, and this is in all cases probably somewhat below that in the carotid. If this limit be not attained, the pressure remains latent, and may produce certain changes in the nutrition of the central nervous system. There can be no doubt that intracranial as well as intravertebral pressure may be increased by causes seated in the spinal canal. Certainly clinical observations show that this occurs but seldom, but cases of myelitis and of acute (spinal) meningitis are noticed from time to time in which, at the commencement of the disease, true symptoms of intracranial compression become apparent. No lesions perceptible to the naked eye were discoverable in the central nervous systems of the animals experimented on (B. Naunyn und J. Schreiber, in *Archiv f. exp. Path. u. Pharmak.*, B. xiv. Hft. 1 u. 2).—Bostroem, in *Centralb. f. Chirurg.*

THE OPERATIVE TREATMENT OF CASEOUS LYMPHATIC GLANDULAR SWELLINGS.—Caseous disease of lymphatic glands, as in the corresponding processes in bone, admits of two modes of treatment, the radical (operative) and the conservative. In one class of cases (trustworthy statistics of which are as yet wanting) the growths develop slowly, and may attain a large size without the patient's general health becoming affected. In the course of years the enlargement gradually shrivels, if it does not altogether vanish, and the gland remains in this indurated condition till the end of life. Or, at a very advanced stage, the gland may soften, the skin over it give way, and caseous masses be discharged. The remains of the gland contract, and a stellate cicatrix results. In another class of cases neighbouring packets of lymph-glands become rapidly swollen, pyrexia supervenes, and rapid softening of the gland tissue follows. The patient loses flesh and acquires that peculiar anæmic look seen in the corresponding affections of bones and joints. Here, also, a "relative" cure is possible under favourable conditions of hygiene and treatment, but many cases will succumb to miliary

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LAPAROTOMY IN RUPTURE OF THE BLADDER.—Alex. W. Stein, M.D., New York (in *Annals of Anatomy and Surgery*, August

1882), strongly recommends laparotomy as a means of treatment. In intraperitoneal lacerations he points out that its advantages are—(1.) That it permits direct inspection of the seat of lesion and the appreciation of concomitant injury to other parts; (2.) That it permits of the removal from the peritoneal cavity of the extravasated urine and blood; (3.) That it permits of the cleansing and disinfection of the peritoneal cavity; (4.) That it permits the accurate closure of the vesical wound, preventing further effusion of urine. Both clinical and experimental evidence, he considers, teach that the danger to life is not in the laparotomy, but in the presence within the peritoneal cavity of a decomposable and septic fluid, and when this is removed shortly after such extravasation has occurred, laparotomy may be practised with almost a certainty of success. The disposition of the bladder wound to union is so great that it may be regarded as certain if the edges of the same are accurately brought together, while the danger to life from wounding the peritoneum is in itself very slight. In cases of doubt as to the seat of rupture, it is recommended to at first avoid the peritoneum in the abdominal section, including this structure only when it is found that the rent communicates with the abdominal cavity. The question of suturing the bladder to the abdominal walls is also discussed. That it is feasible is shown by three experiments performed on dogs by Drs Stein and Harrison, and by the fact that it has been done once by T. G. Thomas, who had to incise the anterior wall of the bladder in removing an ovarian cyst adherent to it. After the cyst was removed the lips of the bladder wound were drawn up and clamped between those of the abdominal wound by means of silver sutures. A Sims' sigmoid catheter was kept in the bladder. The sutures were removed on the tenth day, and at the end of three months the patient went home entirely well. In the experiments on the dogs the operations were intraperitoneal. The lips of the vesical wound were brought together, along with those of the abdominal wound, by means of silk sutures. In none was healing by first intention got. After three or four days the sutures gave way, and healing went on by granulation, with escape of urine from the abdominal wound. The adhesions formed were sufficient to prevent its passing into the peritoneal cavity. In two of the cases the fistulous tracks closed rapidly; in the third a subcutaneous extravasation of urine occurred. Some sloughing took place, but the sore healed kindly. Antiseptic dressings were tried on two of the "patients," but with ill success. The third was not dressed, the wound being irrigated occasionally with carbolized water. Post-mortem examination (the dogs being killed after the wounds had quite healed) showed in each that the bladder was firmly adherent to the abdominal wall and considerably hypertrophied.

THE TOILETTE OF THE TRACHEA AFTER ITS INCISION FOR THE

RELIEF OF CROUP (Lewis S. Pilcher, M.D., Brooklyn, N.Y., in the *Annals of Anatomy and Surgery,* September 1882).—The author recommends that tracheotomy should be done much earlier than it usually is, in order to admit of deliberation in every step, and, where there is intra-tracheal exudation, to allow of the "toilette of the trachea" being carefully performed. His opinion is that in every case in which operative relief is attempted the operation should be planned and executed with the view of exposing and, as far as possible, removing the exudation, should it be present. Cases of croup, he says, have been too generally regarded by the tracheotomist only from the standpoint of the immediate danger of suffocation that was imminent, as if the establishment of a new respiratory orifice was the only condition to be met. The presence of the exudation in the trachea being a source of danger, the necessity for its removal should be kept in view. The careful exploration and cleansing of the trachea are to be considered of an importance only second to that of providing a new respiratory orifice. The place where the trachea should be opened is to be decided, not by the anatomical conditions that render one part easier of access than another, but by the morbid conditions. The cannula should, if possible, get below the exudation. Therefore the point of incision should be as low as possible, *i.e.*, below the thyroid isthmus. The two disadvantages met with here, viz., the varying number of vessels and the embarrassing mobility of the mediastinal connective tissue, which is increased by the great respiratory efforts made, Dr Pilcher gets rid of by Pean's forceps and an automatic supra-sternal retractor. These instruments, he finds, render him to a very great extent independent of assistants. When the opening into the trachea is made, it should be kept open by means of hooks or retractors, and a careful inspection of the interior made. Where there is an exudate in process of exfoliation, every effort should be made to secure its removal at once. A soft feather, or a sponge on the end of a curved forceps, or forceps alone, may be used for this purpose. The insertion of the cannula then becomes a much easier and safer matter. Where, after the introduction of the cannula, catarrhal products tend to collect in the trachea, should the patient be unable to cough them out, inhalations of vapour, instillations and injections of liquids, may be practised. The two latter are the methods chiefly relied on by the author. When the symptoms are not urgent, he permits three or four drops of warm water and chloride of sodium, or of lime-water, or of dilute lactic acid, to run down through the tube into the trachea as often as seems to be necessary to keep the secretions diffluent and the expectoration free. Whenever this is not sufficient to prevent the continued marked accumulation of secretions, whether of tenacious and inspissated mucus or of muco-pus and membranous *débris*, injections of the solvent fluid, to the amount of a drachm or more, are to be made by means of a syringe deep into the cavity of the trachea.

THE BOSTON
SOCIETY FOR
MEDICAL
OBSERVATION

Part Fifth.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—The following gentlemen passed their final examination for the qualification in Medicine during the sittings in October 1882, and were admitted L.R.C.P. Ed.:—Henry Harvey de Mello, Calcutta; Samuel George Thompson, Edinburgh; William Follows, Wolverhampton; Ralph George Heathcote, Manchester; John Urquhart, Ontario, Canada; John Hope Potter, Sheffield; John Arkle Waring, London; Wm. Abraham Dawson Montgomery, London; Arthur George Machell, London; Howard Harris, London; Edward Aug. Harbord, Liverpool; Henry Urgent Bromley, Braintree; John Harrison, Essex; Bowen Stilon Mends, Blackheath; Herbert Remmington Mead, Blackheath; Francis Edward Allen, London; George Norman Robins, Waltham-Abbey, Essex; John Rodley, Todmorden, Lancashire; Arthur Samuel Stokes, Leicester; Samuel Butterworth, Rochdale; Philip Vincent, Taunton, Somerset; Edward Ramsay Peter Faddy, London; Richard Davies, Bath; David Hugo Daniell, London; Mathew Bernard Shirley, Leeds; George Henry Kinch, London; John T. Carroll, Edinburgh; Jas. Henry Croudace, Burnley, Lancashire; Walter Stannes Snell, Devon; Jeffrey Talbot Sutherland, Edinburgh; Joseph Archibald Gracey, Edinburgh; James Nagle Clery, Kilmallock; George Fox, South Shields.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—The following gentlemen passed their final examination for the double qualification in Medicine and Surgery at the sittings held from 26th October to 3rd November 1882, and were admitted L.R.C.P. Ed. and L.R.C.S. Ed.:—Thomas Ross, Edinburgh; John Steell, Edinburgh; James Munday Litcham, Swaffham, Norfolk; John Cundell Wood, Newcastle-on-Tyne; William Cody, Co. Longford; Millice Culpin, London; William Francis Fryer, Bayeralstown; William Waddell, Belfast; John Foggin, Newcastle-on-Tyne; A. Keess, Edinburgh; Robert Griffith Roberts, Liverpool; Jeremiah O'Callaghan, Co. Cork; Denis Scully, Co. Sligo; John Joseph Tisdale, Liverpool; David Huey Dervock, Co. Antrim; Edmund Rowe, York; H. Horbury Preston, Manchester; Henry Green, Hyde Park; Wm. Davidson, Edinburgh; Samuel Frazer, Armagh; William Stephen Johns, Lincolnshire; William Holdsworth, Grimsby, Lincolnshire; Harry Cornelius Edwin Rogers, Manchester; John Powell, Bridgend, South Wales; Robert Aloysius Hamilton Williams, Dungarvan; Daniel Rees Davies, S. Wales; Richard Wagner, Edinburgh; Edwin Douglas, Edinburgh; George Cooper Harrison, Southport; Samuel Mackey, Co. Derry; James Ross Irwin, Co. Derry; William Bedford Silverwood, Huddersfield; J. Beamish Hamilton, Drogheda; William Morrison Storrar, Chester;

Alexander Oswald Cowan Watson, Edinburgh; John Barfield Adams, Caermarthen; Charles Theodore Uvo Babst, Jarrow-on-Tyne; William Carden Cousens, Edinburgh; Michael Jos. Molony, Cashel; Edward Patrick Walsh, Dublin; Alexander Brown Murdoch, Edinburgh; Charles Jos. Blake, Tuam; John Lusk Torrens, Maghera; Daniel P. Condy, Co. Kildare; Walter Frederick de Watteville, Edinburgh; John Richard White, Dublin; John Gorham, Co. Galway.

UNIVERSITY OF EDINBURGH.—The following gentlemen have passed the first professional examination, October 1882:—William Anderson, William A. Anderson, Edmund Antrobus, John Bardgett, T. W. Barraclough, Georges Baschet, William J. Bell, Charles Bennett, Reginald Bowman, Joao Francisco Braga, J. D. Broadfoot, Harbit Brown, R. F. Burt, Ernest Kenneth Campbell, David Cassels, Ernest James Cheetham, Stephen Frazer Clark, Frank Gerard Clemow, Frederick William Collinson, Robert Swan Coulthard, James Cunningham, George Scott Davidson, Joseph Wm. Dawes, John Henry Deamer, Kenneth Mackinnon Douglas, David Somerville Doughty, J. J. Drinkwater, Walter Musgrave Eaton, Ahmed Fahmy, Peter Fraser, Edwin Sargood Fry (with distinction), John Garvie, William Gregory Gibson (with distinction), James Gray Glover, Robert Gordon, J. W. Grant, Alexander M. Gray, Allen Edward Lambton Gray, David Campbell Gray, David Middleton Greig, Thomas Howard Griffith, Joseph Griffiths, George Lovell Gulland, Charles Robert Hailes, Joshua Jacobus Hoffman, Robert Wilberforce Inkster, Samuel Baker Jones, Robert Conwy Joyce, H. L. St P. Keelan, Frederick Truby King (with distinction), Ernest Cory Kingdon, John Charles Lamont (with distinction), John Dickinson Leigh, Charles Lewis Lempriere, Charles James Lewis, Edward Linton, William G. Little, James Richardson, Thomas Logan, A. L. B. Loubser, Wilton Wood Russel Love, Donald Campbell Archibald M'Allum, Duncan M'Diarmid, J. R. M'Gavin, George Donald Macintosh, John M'Jerrow, Francis Wallace Mackenzie, Wm. Henry M'Lean, Robert MacLelland, John M'Donald MacLennan, Robert Charlie MacWatt, Daniel Groves Marshall, Charles G. Matthew, David Macleish Moir, David Morgan, Thomas Morris, Robert S. Morrison, Charles James Morton, John Kemp Murray, Andrew W. Nash, William Ramsay Nasmyth, F. A. Neal, John M'Donald Nicoll, Maurice Paterson, John Pirie, George Porter, Edward Thomas Pritchard, Trevor John Pritchard, Selwyn Hall Puckle, James Reid, Francis Mortimer Reynolds, J. B. Ridley, John Richards, Ernest Roberton, Ernest Theophilus Roberts, Frederick Chas. Roberts, Hugh L. Roberts, Arthur MacLeod Ross, John Ross, D. Wilson Scotland, Gerard Affleck Scott, W. E. S. Scott, Harold Scurfield, Robert William Smeddle, George Purves Smith, John William Smith, George Laird Somerville, Gabriel H. Steyn, Robert Stewart, Robert Stirling, William George Sym, Charles C. Teacher, Caleb Terry, John Bolton Thackwell, William James Thomas, Francis Courtenay

Thorp, John William Travell, Ernest B. Turner, J. C. S. Vaughan, Quintin Macadam Wallace, John Warnock, Clarence Henry Waters, Adam D. Wilson.

THE Grant College Medical Society have resolved to perpetuate the memory of Dr C. Morehead, founder of the Society, and the first Principal of the Grant Medical College, in some suitable shape, to be afterwards agreed upon by a committee.—*Homeward Mail*, 11th November 1882.

PROFESSOR PIRRIE of Aberdeen died 21st November 1882, full of years and honours. A notice of this eminent surgeon will appear in our next number.

MEDICAL BRAVERY.—The following generous recognition of the bravery of two medical officers in Egypt is from the *Philadelphia Medical News* of 14th October:—"The engagement at Kassassin, in the recent Anglo-Egyptian war, afforded two illustrations of the bravery of the army medical officers which are worthy of being recorded, especially as in the English army the surgeons are classed as 'non-combatants,' and are persistently denied their proper rank and recognition. The only officer who was killed on this occasion was Surgeon-Major George Shaw, who, for the purpose of rendering assistance to a wounded man, voluntarily exposed himself to a scathing fire from the enemy. He was struck in the temple by a rifle bullet, which penetrated and lodged in the brain, and lived only about three hours in an unconscious state. During the same engagement some movement of the troops left the first company of the Army Hospital Corps in an isolated and dangerous position. The medical officer in charge refused to permit the work of dressing the wounded, many of whom needed instant attention, to be intermitted for a moment, and declined to make any change of position until that duty had been attended to. His men, some forty in number, accordingly filled their haversacks with sand, so as to form temporary breastworks, took the rifles of the wounded who were unable to use them, and defended their charge until the arrival of the cavalry terminated the enemy's attack. These facts are obtained, not from the columns of the London daily press, nor from the illustrated weeklies, which are filled with descriptions and representations of the heroism of the Household Cavalry and the valour of the troops in general, but from modest notices in the correspondence of one or two medical journals. So far as we have seen, the lay press has had no word of commendation for the men who, relegated officially to an inferior social and military position, without the stimulus of the tremendous excitement of the officers who make or mar the game of war, and with little or no prospect of sharing the honours in the event of success, thus coolly and unflinchingly risk and lose their lives in the performance of their duty, not only upon the field of battle, but in confronting and combating disease in its manifold shapes. We have no wish to detract from those soldiers who have so well acquitted themselves during the recent campaign, but truly brave men can afford to give honour wherever and to whomsoever it is due. We should have been glad to see some mention of the medical department in the despatches, or some allusion to it in the encomiums upon the army with which the English press is now filled."

Dr Holmes on Physical Diagnosis and Specialism.—I have often felt, when seeing hospital patients worried by hammering and long listening to their breathing, in order that the physician might map out nicely the diseased territory, the boundaries of which he could not alter, as if it was too much like the indulgence of an idle and worse than idle curiosity. A confessor may ask too many questions; it may be feared that he has sometimes suggested to innocent young creatures what they would never have thought of otherwise. I even doubt whether it is always worth while to auscult and percuss a suspected patient. Nature is not unkind in concealing the fact of organic disease for a certain time. What is the great secret of the success of every form of quackery? *Hope kept alive.* What is the too fatal gift of science? *A prognosis of despair.* "Do not probe the wound too curiously," says Samuel Sharp, the famous surgeon of the last century. I believe a wise man sometimes carefully worries out the precise organic condition of a patient's chest when a *very* wise man would let it alone and treat the constitutional symptoms. The well-being of a patient may be endangered by the pedantic fooleries of a specialist.—*Boston Medical and Surgical Journal.*

A New Disease.—A California physician who discovered a new disease—love madness—has been experimenting with the person afflicted therewith, and has produced the "love parasite," or bacillus micrococcus. This he cultivated up to the twentieth generation, and with the parasites of that generation he inoculated a number of subjects. The inoculation was invariably successful, symptoms of the disease appearing a very short time after the operation. A bachelor, aged fifty, on the first day after the inoculation had his whiskers dyed, ordered a new suit of clothes and a set of false teeth, bought a top buggy, a bottle of hair restorer, a diamond ring, and a guitar, and began reading Byron's poems. The inoculation produced symptoms of the same nature in a young lady of forty-five. She spent five dollars at a drug store for cosmetics, bought a lot of new hair and a croquet set, sang "Empty is the Cradle," sent out invitations for a party, and complained that the Chico young men do not go into society. An inoculated youth of seventeen, employed in a country store, did up a gallon of molasses in a paper-bag, and also, in a fit of absent-mindedness, put the cat in the butter-tub and threw some fresh butter out of the window. Finally, he sat in a basket of eggs while looking at a photograph of a pretty girl, and was discharged for his carelessness. The Chico doctor is still experimenting, and will soon lay the results of his observations before the medical world.—*New York Medical Record.*

OBITUARY.—THE LATE DR PARNELL.

DEATH has recently removed from our midst a well-known and respected member of the medical profession, in the person of Richard Parnell, M.D., who died at Merchiston, Edinburgh, last month. Dr Parnell was born in 1810, and graduated at Edinburgh University. He was also a fellow of the Royal Society of Edinburgh. The bent of Dr Parnell's mind inclined from the first towards biology. He was an excellent botanist and a proficient zoologist, and as early as 1836 we find his name included in the list of the twelve original members of the Botanical Society Club—a *côterie* which, we are glad to say, still flourishes under the present presidentship of Professor Bayley Balfour. The early years of Dr Parnell's life were those of the Wernerian Society, and his colleagues were Professor J. H. Balfour, still, happily, an honoured name amongst the living, and the witty and genial Edward Forbes. To the Wernerian records Dr Parnell contributed, in 1839, a valuable memoir on the fishes of the Firth of Forth, a paper which made its mark even in days when elaborate specific descriptions of animals and plants were much more in vogue than now. His paper was enriched by engravings which were drawn and cut by his own hands, and the Wernerian gold medal formed only a fitting tribute to the care with which his facts and data had been compiled. About 1839 Dr Parnell visited the West Indies and the States; but in 1842 botany so far engaged his attention that he produced an elaborate memoir on "The Grasses of Scotland." Here, again, Dr Parnell's artistic tastes found an outlet in the illustrations of this work. A diligent collector, Dr Parnell accumulated many objects of biological interest, which it is to be hoped may find a permanent place in some of our collections. Wherever his steps led him, the flora and fauna received attention, and in Egypt particularly, his holiday rambles were fraught with scientific work. Dr Parnell was a native of Devonshire, and there is no saying how strongly the choice scenery of the quiet Devonshire lanes and the fern paradises of that beautiful county may originally have inclined his tastes towards natural history pathways. Be that as it may, Dr Parnell's name will be remembered in the north as that of a quiet, earnest, devoted student of nature, and as that of a genuine, sincere, and upright man. His tall and spare but commanding figure was well known in Edinburgh, and perhaps was most notably seen in Christ Church, Morningside, where he faithfully worshipped. The era of biology has changed widely since the old days of the Wernerian Society, and since the times when Edward Forbes was the ruling spirit of Edinburgh biology; but amongst the biological writers to be remembered by us to-day in all kindliness, none can claim a more grateful place than Richard Parnell, of whom it may be said, that to him the knowledge of nature was but a revelation of the divine.

CORRESPONDENCE.

THE LATE PROFESSORS BENNETT AND GOODSIR.

To the Editor of the Edinburgh Medical Journal.

Dear Mr Editor,—In common, I doubt not, with all my fellow alumni, I have been aghast at the way in which our late revered Professors Goodsir and Bennett have been spoken of by Professor Greenfield in his introductory address. As neither of these two professors was officially connected with pathology, Greenfield actually went out of his way to mention them, in deference to their friends, he says. Their friends could well have spared his remarks. It is but seldom that the rule *de mortuis nil nisi bonum* is infringed without the infringement bringing vengeance on the head of the offender. In this case the vengeance has been sudden and complete. Ignorance of his own subject in a professor is an unpardonable crime; and if Dr Greenfield's words convey any truth at all, it is that he is absolutely ignorant of the history of pathology during the last fifty years. It appears that he knows something of pathology as it existed before that; it is to be presumed from his position that he is fairly abreast of the science of to-day; but how he is to connect the two I know not, nor how he can profitably teach pathology while wholly ignorant of its most important epoch —that pre-eminent epoch during which pathology was struggling to find a physiological basis, and those pre-eminent men to whom she is, if not entirely, at least mostly indebted for the finding of that basis. For all that period there seems to be for Greenfield but one man, Virchow, and for his class but one book, *Cellular Pathology*—an able man, no doubt, and a valuable book; but those who know the history of the past fifty years believe that neither would stand where they now do had not Goodsir pre-existed. Throughout the whole *Cellular Pathology* Goodsir's name is only once mentioned, and that in connexion with a fact which might be equally well credited to Martin Barry, and yet every one at all acquainted with the subject must acknowledge that all that is valuable in that work is based on Goodsir's researches. Goodsir deeply felt the indignity thus put upon him, and so did all those friends who were most dear to him. What Goodsir would say, were he now alive, to the undeserved contumely cast upon him by a professor in his own University, from whom he had every right to expect far other treatment, I shall not now stop to inquire. I shall only say that to Goodsir's researches, published now forty years ago, we owe the first truthful statements as to the functions and development of the cell, which have been the starting-point of modern pathology; that these researches mark a most important era in the history of pathology; that it is not creditable to the present professor of pathology that he should be ignorant of this; and that it is even less creditable that, knowing so little of this epoch, he should gratuitously assume that to a stranger and a foreigner is due t honour that he ought to have known by right belongs to our o countryman, a former professor in the same University with wh he is now connected.

To Bennett, Dr Greenfield has been even more unjust, becau while bearing well his part in the scientific development of patholo probably no man in his day did more than Dr Bennett for t development of the practical side of pathology; I mean, of cour in relation to physic. Greenfield says that "Bennett did dev much attention to pathology, and did contribute much to i progress, . . . but what he did in actual teaching it was n difficult to ascertain." Presently he goes on to say that "now t vast field of parasitic pathology is open to us. Twenty years a who would have thought . . . of growing diseases in tubes a bottles and cultivating them on boiled potatoes?" Why, t smallest modicum of research would have taught him that, n twenty, but forty years ago, Bennett cultivated one disease up potatoes and apples and transferred it to the human body. Tr it was only one disease, and now we know many which can be grown; but that was the starting-point of pathology in t direction. Bennett was a pioneer, he was a Columbus in the scien of parasitic pathology, and it is easy to follow where others le But Bennett did more; he was the earliest teacher of histology the Edinburgh school. He brought the ultimate facts of patholo from 3 to 600 times nearer his students than they ever were befo He discovered an entirely new disease, one hitherto quite unkno —leucocythæmia. He propounded a doctrine of inflammati which lasted at least as long as any of these doctrines generally and which in Bennett's hands proved most efficient in overthrow one of the most dangerous and uncertain methods of treatment wh ever cursed mankind. Greenfield reproaches Bennett for cling to his theory even while he felt it slipping from beneath h Small blame to him; he clung to it as the surest bulwark again relapse—always threatened while he lived—of that treatment was so helpful in overthrowing,—a treatment which since the d of Galen has deluged the earth with blood, and piled victim a victim on the altar of so-called scientific medicine. Forty y ago railroads, telegraphs, and ocean-steaming were but commenc but no one thinks of striking the names of Stephenson, Wheatst or Fulton out of the proud roll of Britain's worthies because ot have entered into their labours and outstripped them. Forty y ago Goodsir and Bennett were in their prime; they did good great work in their day and generation, and their names inseparably inwoven with the records of the progress of scie with the fame of the University to which they belonged, and the love and respect of their pupils, and any attempt to damn t with faint praise will only recoil on the head of him who mak —Yours obediently, ALUMNUS EDINBURGENS

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